

A Green Infrastructure Statement

on behalf of

Utopia Design Architectural Services

for

Tir Cook Farm

Treharris Mountain Road

Treharris

Merthyr Tydfil

CF46 5RN



Produced by: **Little Wing Ecology CYF** (A Not-for-profit Company Limited by Guarantee)

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Project Overview

Client	Utopia Design Architectural Services
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Draft	25.10.2025	Nic Aldridge	Sam Haycock
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The assessments made assume that the site(s) and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by Little Wing Ecology (CYF).

Site Address: Tir Cook Farm, Treharris Mountain Road, Treharris, Merthyr Tydfil, CF46 5RN

Planning Application Reference: PA/25/0011

Project: Erection of Stables and Retention of Horse Walker, Horse Manège and Car Park

Site Area: Approximately 5.55 ha

1. Introduction

This Green Infrastructure Statement supports a planning application for the erection of stables and retention of existing equestrian infrastructure (horse walker, manège, and car park) at a working farmyard in Treharris. The development comprises construction of new stable buildings on existing concrete hardstanding, alongside retention of established equestrian facilities. All built structures are confined to existing hardstanding, avoiding direct impacts on semi-natural habitats in the surrounding agricultural landscape.

The statement demonstrates compliance with Planning Policy Wales (Edition 12, 2024) Chapter 6, the Environment (Wales) Act 2016 Section 6 Biodiversity Duty, and the Well-being of Future Generations (Wales) Act 2015. Green infrastructure enhancements are integrated following the stepwise approach (avoid, minimise, mitigate, compensate) and deliver biodiversity net gain aligned with the DECCA Framework (Diversity, Extent, Condition, Connectivity, Adaptability).

2. Site Context and Baseline

2.1 Location and Setting

The site occupies an upland rural setting within open countryside, characterised by a mosaic of agricultural pasture interspersed with scattered woodland and mature tree coverage. The Nant Cothi watercourse is located approximately 500m to the east. Access is via an undesignated road from the south. The surrounding landscape comprises field boundary hedgerows, woodland blocks, and agricultural land that provide structural connectivity for mobile species, particularly bats.

2.2 Baseline Ecological Value

The site comprises a working farmyard in daily operational use, with extensive concrete hardstanding, barns, agricultural outbuildings, and a residential bungalow at the southern end of the western perimeter.

Baseline ecological value: Low

Habitat diversity is minimal. Vegetation is limited to depauperate ruderal species colonising hardstanding margins and building edges. The dominance of sealed surfaces and regular disturbance from vehicular movements, machinery operation, and livestock handling severely limit wildlife suitability. The site's ecological function is restricted to use by tolerant generalist species adapted to disturbed agricultural environments. No boundary hedgerows, artificial roosting features, or nesting structures are present.

3. Green Infrastructure Strategy and Enhancement Measures

The green infrastructure strategy enhances ecological connectivity between the low-value farmyard and surrounding higher-quality habitats. Given the site comprises predominantly hardstanding with negligible biodiversity value, the strategy prioritises establishing functional linkages to adjacent habitats through three principal interventions:

3.1 Native Hedgerow Creation (170m)

Native mixed species hedgerows will be established along the north-western (60m) and north-eastern (110m) boundaries of the farmyard, totalling 170m of new linear habitat.

Specification:

- Double-row planting: 60-80cm bare-root whips at 300mm spacing (6 plants per linear metre)
- Species mix: Hawthorn 60%, Blackthorn 15%, Hazel 10%, Field Maple 5%, Dog Rose 5%, Guelder Rose 5%
- Stock-proof fencing protection during establishment (5 years)

Ecological function:

- Structural connectivity linking the farmyard to the wider agricultural hedgerow network, scattered woodland, and Nant Cothi watercourse
- Nesting habitat for priority farmland birds (dunnock, linnet, song thrush)
- Bat commuting corridors and hedgehog movement routes
- Year-round foraging resources: spring blossom for pollinators, autumn berries for birds and mammals, invertebrate communities supporting insectivorous species

3.2 Compensatory Roosting and Nesting Features

Bat boxes (2 woodcrete units):

- Location: Western or southern elevations of farm buildings
- Height: Minimum 3m, ideally 5-6m, positioned below eaves
- Target species: Common pipistrelle, soprano pipistrelle
- Purpose: Compensatory roosting habitat for species utilising the agricultural landscape

Bird boxes (2 woodcrete units):

- Location: Eastern or northern elevations of farm buildings
- Target species: House sparrow (priority species), blue tit, great tit
- Purpose: Nesting opportunities for cavity-nesting passerines

Hedgehog access (1 hole, 13cm × 13cm):

- Location: Ground level in farmyard boundary
- Purpose: Maintain connectivity to hedgerow network for this priority species (requires 1-2 hectare range)

3.3 Sensitive Lighting Design

External lighting limited to essential security and safety requirements, following 'Bats and Artificial Lighting in the UK: Technical Guidance Note 08/23' (2023):

- Directional and downward-facing with hoods/cowls/baffles preventing light spill
- Positioned away from hedgerows to maintain dark bat commuting corridors
- PIR sensors to reduce illumination duration where possible
- Warm white LED (2700-3000K) minimising blue light spectrum disruptive to nocturnal fauna

4. Policy Compliance

4.1 Stepwise Approach

Avoid: All structures confined to existing hardstanding subject to long-term disturbance, avoiding loss of higher-quality habitats. Layout maintains zones for hedgerow establishment without fragmenting existing ecological corridors.

Minimise: Sensitive lighting minimises nocturnal wildlife impacts, particularly for bats. Construction avoids bird nesting season (March-August) where practicable.

Mitigate: 170m native hedgerow establishes structural connectivity with the wider hedgerow network, creating bat commuting corridors, bird nesting habitat, and small mammal movement routes.

Compensate: Artificial roosting/nesting structures, hedgerow creation, and sensitive lighting deliver biodiversity enhancement beyond baseline mitigation.

4.2 DECCA Framework and Biodiversity Net Gain

Diversity: 170m native mixed species hedgerow and artificial structures create environmental conditions and ecological niches entirely absent from baseline hardstanding.

Extent: Ecological extent of valuable habitat substantially increased. Baseline provided minimal value; developed site incorporates functional wildlife habitat through perimeter hedgerows and compensatory structures.

Condition: Ecological condition improves from low-value hardstanding to farmyard integrated within native hedgerow network, providing enhanced foraging, nesting, and commuting opportunities with year-round resource availability.

Connectivity: New 170m hedgerow links farmyard to wider agricultural hedgerow network and semi-natural habitats (woodland, Nant Cothi watercourse). Hedgerow corridors facilitate bat commuting, hedgehog movement, and stepping-stone habitat for mobile species. Sensitive lighting preserves dark corridors.

Adaptability: Native hedgerows improve ecosystem resilience through carbon sequestration, temperature moderation, surface water management, structural diversity, multi-seasonal resources, and habitat redundancy.

Biodiversity Net Gain:

- **Baseline:** Concrete hardstanding, depauperate ruderal vegetation, no hedgerows, no roosting/nesting features (value: Low)
- **Post-development:** 170m native hedgerow (six woody species), bat/bird boxes, hedgehog connectivity, sensitive lighting (value: Moderate)
- **Net gain:** Creation of 170m hedgerow habitat, year-round food sources, linear vegetation features, artificial structures, and bat/hedgehog corridors linking to wider semi-natural habitats delivers demonstrable improvement in biodiversity capacity, achieving net gain per Planning Policy Wales requirements.

5. Management and Maintenance

5.1 Responsibilities and Duration

The landowner will implement all enhancement measures and maintain features in perpetuity. Failed or damaged features will be promptly replaced.

5.2 Management Prescriptions

Hedgerows:

- Years 1-3: No trimming. Weekly watering (dry periods, first season). Quarterly weed control. Replace failed plants (November-March).
- Year 4 onwards: Trim two- to three-year rotation (September-February) maintaining 2-3m height, allowing flowering/fruitleting. Never trim March-August (breeding season).
- Infill gaps (November-March) maintaining connectivity.
- Maintain stock-proof fencing (typically 5 years establishment).

Bat boxes:

- Annual visual inspection (September-October). Check integrity; replace if damaged. No routine cleaning (only November-February if excessive debris). Avoid disturbance March-October.

Bird boxes:

- Annual inspection and cleaning (September-February). Check integrity; repair/replace if damaged. No inspection/maintenance March-August (breeding season).

Hedgehog access:

- Quarterly inspection. Keep clear of obstructions.

5.3 Contingency and Monitoring

Contingency: Bat/bird boxes replaced/relocated if damaged or unused after five years. Hedgerows replanted if mortality exceeds 10% (November-March). Hedgehog access recreated if obstructed.

Monitoring: Post-implementation monitoring by qualified ecologist may be conducted following hedgerow planting if required by the local planning authority. Landowner maintains photographic records documenting establishment, wildlife use, feature condition, and maintenance activities.

Success criteria: Hedgerows achieve >90% survival, develop dense structure with annual flowering/fruitleting. Bat/bird boxes remain structurally sound and accessible. Bird boxes show nesting activity within five years. Hedgehog access remains unobstructed.

6. Multi-functional Benefits

Green infrastructure delivers benefits beyond biodiversity:

Environmental: Carbon sequestration, temperature moderation, surface water management, reduced hardstanding runoff, flood risk contribution.

Landscape: Visual screening of built structures, rural character enhancement through traditional hedgerow boundaries, seasonal interest (spring blossom, autumn berries).

Agricultural: Shelter and windbreak for livestock/working animals, soil stabilisation on field margins.

Social and Economic: Wildlife observation opportunities, demonstration of biodiversity-friendly equestrian management, potential property value enhancement, reduced long-term maintenance versus artificial boundaries.

7. Conclusion

This development integrates equestrian infrastructure within a working farmyard whilst delivering significant biodiversity enhancement. The proposals confine built structures to existing hardstanding, avoiding semi-natural habitat impacts, and create 170m of native mixed species hedgerow where none existed, alongside compensatory roosting/nesting structures and sensitive lighting preserving dark corridors.

The comprehensive enhancement suite, combined with long-term management commitment, demonstrates full compliance with Planning Policy Wales (Edition 12), the Environment (Wales) Act 2016, and the Well-being of Future Generations (Wales) Act 2015. The development delivers measurable biodiversity net gain through transformation of a species-poor farmyard environment into an equestrian facility integrated within a native hedgerow network, providing pollinator foraging resources, priority farmland bird nesting cover, bat commuting corridors, and hedgehog movement routes. This fulfils policy requirements for environmental enhancement whilst contributing positively to local ecological network resilience.

Statement prepared in accordance with Planning Policy Wales (Edition 12, February 2024) and the Environment (Wales) Act 2016.