Clwydian Planning

Green Infrastructure Statement

Tan Y Ffordd

Introduction

This Green Infrastructure (GI) Statement has been prepared to accompany a full planning application for the replacement of a deteriorating and unfit residential dwelling at Tan y Ffordd**,** located on Ruthin Road, Bwlchgwyn**,** within the Wrexham County Borough Council (WCBC) planning authority.

The application proposes the demolition of the existing house and construction of a new, energy-efficient home with a connected annexe to support the 24-hour care needs of a resident

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The proposed development aligns with the Welsh Government's and WCBC's vision for sustainable development through the retention, enhancement, and integration of green infrastructure elements. These include landscape features, drainage systems, biodiversity enhancements, and open space connectivity.

The purpose of this statement is to demonstrate how green infrastructure principles have been embedded into the design and planning of the development, and how they respond to the Well-being of Future Generations (Wales) Act 2015**,** Planning Policy Wales, and local policy requirements.

Green Infrastructure Policy Framework

The development has been guided by the following policy documents:

- Planning Policy Wales (PPW) Edition 12**:** GI is a key component of place-making and is vital for resilience, biodiversity, health, and well-being.
- Technical Advice Note (TAN) 5 – Nature Conservation and Planning**:** Highlights the integration of biodiversity and landscape features into new development.
- Wrexham Local Development Plan**:** Supports the use of GI as a tool for delivering sustainable, healthy, and inclusive communities**.**
- WCBC GI and Biodiversity SPG (where applicable)**.**

PPW defines Green Infrastructure as:

"The network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places."

Existing Green Infrastructure on Site

A preliminary ecological and landscape appraisal has informed the identification and assessment of GI elements on and around the site.

Natural Features and Vegetation

The site contains a variety of natural and semi-natural green features:

- Mature boundary hedgerows, primarily hawthorn and blackthorn, offering bird nesting habitat and visual screening.
- Scattered shrubs and garden plants within the curtilage.
- An informal lawned area at the rear, used historically as garden space.
- Adjacent pastoral fields**,** which contribute to the broader green network, though not within the red line boundary.

There are no trees subject to Tree Preservation Orders (TPOs) on the site, and no loss of woodland or significant trees is proposed.

Biodiversity and Habitat

There are no statutory or non-statutory ecological designations (e.g., SSSI, LNR, SAC) affecting the site. However, the hedgerows offer modest ecological value as linear wildlife corridors for birds and small mammals. No bat were found within the dwelling which is proposed to be demolished.

Green Infrastructure Vision for the Site

The overarching vision is to retain, enhance and integrate natural features into the fabric of the proposed development, ensuring that it delivers ecological connectivity, landscape value, water management, health benefits, and resilience**.**

This vision is achieved through;

- Retaining existing vegetation where possible, especially boundary hedgerows.
- Integrating a SuDS-compliant drainage strategy to mimic natural processes.
- Enhancing on-site biodiversity through habitat creation, native planting, and bird/bat boxes.
- Improving visual connectivity to green space**,** supporting mental well-being.
- Delivering a home environment that is both functionally and ecologically resilient**,** supporting the health needs of vulnerable residents.

Proposed Green Infrastructure Measures

Retention of Existing Landscape Features

The design proposes **to** retain the mature hedgerows along the rear and side boundaries, protecting them during construction with fencing and avoiding root compaction. These features not only support biodiversity but also create a natural visual buffer**,** enhancing privacy while embedding the dwelling within the rural landscape.

Native Planting and Habitat Creation

The proposal includes native shrub and wildflower planting along the garden edges to support pollinators and small fauna. A pollinator-friendly garden area will be installed, consistent with WCBC's Biodiversity SPG.

Further measures include:

- A wildflower strip at the rear garden edge.
- A mix of berry-producing shrubs (e.g., holly, dog rose) to support bird species.
- Introduction of a small native fruit tree (e.g., crab apple or rowan) in a suitable area.

Sustainable Drainage Systems (SuDS)

To comply with Schedule 3 of the Flood and Water Management Act 2010 (as enforced in Wales), the development will include a SuDS scheme designed to manage surface water in a way that mimics the natural hydrological cycle.

This will include:

- Permeable surfacing for driveways and hardstanding areas;
- A shallow detention basin or swale in the garden to capture runoff;
- Possible use of rainwater harvesting systems for garden use.

This approach will reduce flood risk, improve water quality, and enhance microhabitat diversity.

Biodiversity Enhancements

Although the site has no formal ecological constraints, the design will deliver a net biodiversity gain by including enhancements such as:

- Integrated bat boxes in gable elevations;
- Bird nesting boxes in mature hedgerow areas;
- Log pile or insect hotel in a shaded garden corner;
- Maintenance of dark corridors by using low-level or downlit external lighting.

These small-scale interventions cumulatively create a meaningful improvement in local habitat availability and connectivity.

Landscape and Visual Integration

The design of the new dwelling includes the use of natural tones and materials, such as timber cladding and neutral-coloured render, which help the structure visually assimilate into its green setting. Windows and garden access points are positioned to maximise visual access to green space**,** which has known health and well-being benefits, especially for those with physical or cognitive impairments.

Climate Resilience and Adaptation

Green infrastructure has a central role to play in adapting to climate change, and the proposed development integrates GI features that help build resilience:

- The vegetation layer helps buffer against temperature extremes, providing shade and moderating microclimates;
- Permeable surfaces and SuDS will reduce the risk of surface water flooding during heavy rainfall events;
- Native planting is drought-tolerant and reduces the need for irrigation;
- Air quality benefits are delivered through hedgerow retention, particularly valuable given the site's proximity to a classified road (A525).

In addition, these measures contribute to the well-being of the vulnerable resident, who is highly susceptible to environmental discomfort and disruption. A stable and nature-rich home environment enhances both physical and psychological resilience.

Well-being and Inclusive GI Design

In accordance with the **Well-being of Future Generations (Wales) Act 2015**, this development supports the well-being goals of:

- **A Healthier Wales**: Access to green space, improved air quality, and enhanced biodiversity support physical and mental health.
- **A Resilient Wales**: Ecological enhancements and sustainable drainage increase resilience to climate change and biodiversity loss.
- **A More Equal Wales**: By designing for a family with complex care needs, the development ensures access to green infrastructure for everyone, regardless of ability.

Outdoor areas have been designed to be fully accessible, with step-free surfaces and generous circulation space. The proposed planting and garden areas are intended to be therapeutic and stimulating, particularly for the applicant's sister, whose care requirements necessitate a calm, predictable, and sensory-rich environment.

Long-Term Management and Maintenance

A simple landscape maintenance plan will be adopted post-construction, involving:

- Annual trimming of hedgerows (outside of nesting season);
- Routine inspection and cleaning of SuDS components;
- Replacement planting as necessary;
- Bird and bat box monitoring.

This plan ensures the ongoing functionality of GI features and protects the long-term ecological value of the site.

Conclusion

This Green Infrastructure Statement has demonstrated that the proposed replacement dwelling at Tan y Ffordd has been designed in accordance with the principles of sustainable development, ecological enhancement, and inclusive design. The proposal responds positively to both local and national planning policy, ensuring that green infrastructure **is** not only protected but strengthened as part of the development process.

Through the retention of existing landscape features, incorporation of biodiversity enhancements, implementation of SuDS, and creation of accessible green space, the development supports Wrexham's vision of healthy, inclusive, and resilient communities. It directly benefits the physical and emotional well-being , while contributing to the wider ecological and environmental network.

The planning authority is therefore respectfully requested to support this application as an exemplar of how green infrastructure can be sensitively and effectively integrated into a rural residential development with complex social and medical needs.