ELEMENT SUSTAINABILITY

ERLAS PARK, WREXHAM

(PARC ERLAS, WRECSAM)

SUSTAINABILITY STATEMENT

JANUARY 2025

REF: 2021.313



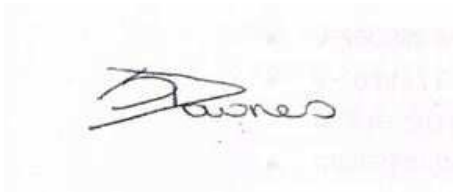
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1. INTRODUCTION

Element Sustainability has been commissioned by Harworth Estates Investments Ltd to review the sustainability performance of the proposed Erlas Park development within Wrexham.

The purpose of this statement is to summarise the relevant policy background and requirements of Wrexham County Borough Council and to demonstrate how the developer has addressed these aims through their proposals, ensuring all practicable measures have been taken to deliver sustainable development at this site.

Details of the design attributes, specifications and characteristics of the scheme are appraised to demonstrate how the proposals contribute to sustainable development in Wrexham and seek to mitigate the environmental impacts of the scheme, providing a sustainability appraisal in support of the planning application.

This report is intended to support the pre-planning application for this development and establish an approach to the delivery of this scheme which meets the criteria outlined by the Council that the developer commits to implement at the site.

2. DEVELOPMENT PROPOSALS

2.1 Development Site Description

The proposed development site currently comprises green fields, and agricultural land and is located to the east of Cefn Road, Wrexham. The site is bordered by other residential properties to the north and west, separated by Bryn Estyn Road and Cefn Road respectively. To the east and south lie agricultural fields.

Figure 2.1 shows the proposed site location plan.

Figure 2.1 – Site Parameter Plan



2.2 Development Proposals

The proposed scheme includes a phased residential development for constructing up to nine hundred residential dwellings with associated infrastructure (playing fields, open space and SUDs attenuation) with all matters reserved except for detailed means of primary highway access.

Figure 2.2 –Strategic Masterplan



Figure 2.3 – Phasing Plan



The proposed accommodation schedule is presented below in Table 2.1.

Table 2.1 Accommodation Summary

Tenure	Type	Units	Mix %	Open Market / affordable %
Open Market	2 Bedroom	228	25	80%
	3 Bedroom	354	39	
	4 Bedroom	141	16	
Affordable	1 Bedroom	8	1	20%
	2 Bedroom	95	11	
	3 Bedroom	74	8	
Total		**900**	**100%**	**100%**

3. POLICY REVIEW

3.1 National Planning Policy

3.1.1 Future Wales – The National Plan 2040

Future Wales – the National Plan 2040 is a national development framework, that sets the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate resilience, developing strong ecosystems and improving the health and well-being of our communities.

The National Plan 2020 provides a framework for the planning system in Wales for the next two decades. It intends to set the direction for developments in Wales in line with key priorities of the planning system to create a vibrant, climate-resilient and sustainable economy for future generations.

There are several local and regional government policies and strategies that are influenced by the National Plan, and that are relevant in the context of the planning application for this scheme. These are:

- Planning Policy Wales
- Natural Resources Policy
- Wales Transport Strategy
- Local Development Plan
- Technical Advice Notes
- Guidance Documents

3.1.2 The Well-being of Future Generations (Wales) Act

The Well-being of Future Generations (Wales) Act 2015 influences the way that councils plan for new development; it demands that development and use of land contribute to improving the economic, social, environmental and cultural well-being of Wales. Under the commitment to delivering sustainable development in order to maximise the contribution to each of the well-being goals.

- Prosperous
- Resilient
- Healthier
- More Equal
- Cohesive Communities
- Vibrant Culture and Thriving Welsh Language
- Globally Responsible

The Well-being of Future Generations (Wales) Act 2015 gives a legally-binding common purpose – the seven well-being goals – for national government, local government, local health boards and other specified public bodies. It is through the Act that Wales will make its contribution to the achievement of the 17 United Nations Sustainable Development Goals. The Well -being of Future Generations Act has been fundamental in the development of this approach. This has enabled the embedding of the principles of sustainable development at all stages and ensures that developments comply with the necessary statutory requirements. Ensuring effects are recognised at the earliest stage and engaging stakeholders throughout this process, seeks to ensure Future Wales is as sustainable as possible.

3.1.3 Planning Policy Wales 2024

Planning Policy Wales (PPW) was updated in July 2024 and sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and

policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs1, MTANs2 and policy clarification letters comprise the national planning policy.

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well-functioning planning system is fundamental for sustainable development and achieving sustainable places.

The principles of sustainable development have been at the heart of planning policy since PPW was first published in 2002. However, the concept has been expanded under the Well-being Act and it requires an improvement in the delivery of all four aspects of well-being: social, economic, environmental and cultural.

The PPW sets out key planning principles that it envisages will meet these objectives, these are:

- Sustainably growing our economy;
- Making the best use of resources;
- Facilitating accessible and healthy environments;
- Creating and sustaining communities; and,
- Maximising environmental protection and limiting environmental impact.

At a strategic level, the key planning policies can be clustered around four themes which contribute individually to placemaking. These themes listed below, draw together the linkages between planning policies to make it clear how individual components contribute to placemaking:

- Strategic and Spatial Choices;
- Productive and Enterprising Places;
- Distinctive and Natural Places;
- Active and Social Places;

The national sustainable placemaking outcomes should therefore be used to inform the preparation of development plans and the assessment of development proposals.

3.1.4 The Productive Enterprising Places

The productive and enterprising places theme of planning policy topics covers economic development, physical infrastructure, energy and the efficient use of resources. The following topics are addressed below:

Energy

The Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low-carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power. The future energy supply mix will depend on a range of established and emerging low carbon technologies, including biomethane and green hydrogen.

Future Wales – The National Plan 2040 sets out the national development plan context for energy and provides specific policies for heat networks and renewable energy development.

Energy Hierarchy

Welsh Government planning policy recognises an energy hierarchy. The Welsh Government expects all new development to mitigate the causes of climate change in accordance with the energy hierarchy for planning, as set out in the following energy policies. Reducing energy demand and increasing energy efficiency, through the location and design of new development, will assist in meeting energy demand with renewable and low carbon sources.

Reduce Energy Demand and Use of Energy Efficiency

Sustainable Buildings –

The planning system should support new development that has very high energy performance, supports decarbonisation, tackles the causes of the climate emergency, and adapts to the current and future effects of climate change through the incorporation of effective mitigation and adaptation measures. The Welsh Government's policy is to secure zero carbon buildings while continuing to promote a range of low and zero carbon technologies as a means to achieve this. Sustainable building design principles should be integral to the design of new development. Development proposals should:

- Mitigate the causes of climate change, by minimising carbon and other greenhouse gas emissions associated with the development's location, design, construction, use and eventual demolition; and,
- Include features that provide effective adaptation to, and resilience against, the current and predicted future effects of climate change.

Making Best Use of Material Resources and Promoting the Circular Economy –

Placemaking embraces the inter-relationships between the built and natural environment. Choices about the use of material resources should be based on making the most appropriate and sustainable use of finite resources and promoting the principles of a circular economy.

The principles of the circular economy represent a move away from the current linear model of make, use, dispose, towards the reuse, repair and recycle of wastes which arise during development. The planning system facilitates materials recycling through advocating the use of secondary aggregates in construction, but circular economy principles should underpin all developments.

Understanding and identifying the specific characteristics of a circular economy as far as this relates to planning will include early consideration in the preparation of development plans and when designing development proposals of the following:

- Promoting the use of existing buildings wherever possible;
- Designing out waste by using materials which are or can be remanufactured, refurbished, disassembled and recycled, or can be deconstructed and reused;
- Designing out waste through appropriate site selection and treatment;
- Encouraging a more adaptable and durable approach to building design using design choices which mean buildings are adaptable during their lifetime (as well as at the end of their use);
- Designing in reused materials and elements, such as recycled and secondary materials; and,
- Recognising synergies and the multiple economic, environmental, social and cultural benefits which can be gained through appropriate materials choices.

Renewable Energy Targets

The Welsh Government has set targets for the generation of renewable energy:

- for Wales to generate 70% of its electricity consumption from renewable energy by 2030;
- for one Gigawatt of renewable energy capacity in Wales to be locally owned by 2030; and
- for new energy projects to have at least an element of local ownership.

The planning system has an active role in helping ensure the delivery of these targets, in terms of new renewable energy generating capacity and the promotion of energy efficiency measures in buildings.

The planning system should support new development that has very high energy performance, supports decarbonisation, tackles the causes of the climate emergency, and adapts to the current and future effects of climate change through the incorporation of effective mitigation and adaptation measures.

Sustainable building design principles should be integral to the design of new development.

3.2 Technical Advice Notes

Technical advice notes (TANs) provide detailed planning advice. Therefore, the following TANS apply to the proposed scheme:

TAN 5: Nature Conservation and Planning - This Technical Advice Note provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. This guidance note should be read in conjunction with Planning Policy Wales (2002).

TAN 12: Design and Practice Guidance: Planning for Sustainable Buildings – This Technical Advice Note (TAN) should be read in conjunction with Planning Policy Wales (PPW) which sets out the land use planning policies of the Welsh Government. The purpose of this TAN is to equip all those involved in the design of development with advice on how 'Promoting sustainability through good design' and 'Planning for sustainable building' may be facilitated through the planning system.

TAN 15: Development & Flood Risk - This TAN provides technical guidance which supplements the policy set out in Planning Policy Wales concerning development and flooding. It advises on development and flood risk as this relates to sustainability principles (section 2.2 PPW), and provides a framework within which risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed.

3.3 Local Planning Policy

3.3.1 Wrexham County Borough Local Development Plan (LDP) 2013-2028.

The local development plan was adopted on the 20th December 2023. The LDP now represents the adopted statutory local development plan for the County Borough and should be read alongside Future Wales: The National Plan. The Plan has been prepared in the context of Planning Policy Wales 11 and the Development Plans Manual. The Plan covers the fifteen years ending on 31st December 2028.

Policy SP14: Natural Environment - Development will only be permitted where it seeks to protect, conserve and enhance the natural environment including:

- Special Areas of Conservation, Special Protection Areas, and Ramsar Sites;
- Sites of Special Scientific Interest and National Nature Reserves;
- Protected Species and their habitat;
- The Clwydian Range and Dee Valley Area of Outstanding Natural Beauty
- Local Wildlife Sites;
- Local Nature Reserves;
- Special Landscape Areas;
- Natural landscape features and Green Infrastructure such as trees, hedges and woodland which contribute to the quality and diversity of the natural environment and play an important role in mitigating the impact of climate change;
- The quality of natural services including water, soundscape, air and soils; and,
- Habitats and species of principal importance to Wales.

Policy SP18: Climate Change - To mitigate against the effects of climate change and adapt to its impacts, development proposals will need to demonstrate that they have taken into account the following:

- Reducing carbon emissions;
- Protecting and increasing carbon sinks;
- Adapting to the implications of climate change at both a strategic and detailed design level;
- Promoting energy efficiency and increasing the supply of renewable energy; and
- Maintaining ecological resilience;
- Avoiding areas susceptible to flood risk in the first instance following the sequential approach set out in national guidance. Highly vulnerable development, as defined in TAN15: Development and Flood Risk, should not be located within zone C2;
- Preventing development that increases flood risk; and,
- Assesses the potential effects of climate change when preparing a Flood Consequence Assessment for the site.

Policy SP19: Green Infrastructure - Wrexham's distinctive natural heritage provides a network of green and blue infrastructure. Protection, conservation and enhancement of natural heritage networks need to be reconciled with the benefits of development. The development will be required to maintain the extent, quality and connectivity of multi-functional green infrastructure on or near a site, and, where appropriate to enhance it by:

- Creating new interconnected areas of green infrastructure between the proposed site and the existing network;
- Filling gaps in the existing network to improve connectivity;
- Protecting the features most valuable for both nature and people; and
- In instances where the loss of green infrastructure is unavoidable, provide mitigation and compensation for the lost assets on a site-specific basis.

Policy NE3: Trees, Woodlands and Hedgerows - Development will only be permitted where it does not cause unacceptable harm to trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage value or those that provide important ecosystem services.

Development affecting all existing and new proposed woodlands should:

- Support proposals which assist in the respectful and appropriate use and protection of woodlands and boundary edges;
- Promote sustainable management to deliver multiple benefits; and,
- Support the relevant aims and objectives of the Wrexham Tree & Woodland Strategy 2016-2026 and all subsequent amendments.

Where adverse effects cannot justifiably be avoided, and sustainable integration is not possible then adequate mitigation will be required. In such cases development should include proposals for the planting of new trees, woodlands, and hedgerows within the site, ensuring connectivity between proposed and existing green infrastructure.

Policy MW5: Sustainable Waste Management - Proposals for new development should demonstrate how the production of waste will be minimised during all stages of the development and how wastes which do arise will be managed sustainably, following the waste hierarchy.

Proposals for new development should demonstrate, where relevant, that adequate facilities and space for the collection, composting and recycling of waste materials have been made.

Any potential conflict between sensitive development and waste management uses should be minimised.

Policy RE1: Development and Renewable Energy/Low Carbon Technology - The council require developers of the Key Strategic Sites and major sites (one hundred dwellings or more, or development exceeding one thousand square metres) to incorporate schemes which generate energy from renewable and low carbon technologies unless it is demonstrated that it would not be financially or technically viable to do so. This includes opportunities to minimise carbon emissions associated with the heating, cooling and power systems for new development. An independent energy assessment investigating the financial viability and technical feasibility of incorporating such schemes will be required to support applications.

3.4 Regulatory Framework

Building Regulations, Part L - Conservation of Fuel and Power sets the compliance standards for energy demand and carbon dioxide emissions from buildings. Guidance on how to meet the requirements of this regulation is provided within several approved documents. The relevant document is referenced below:

Approved Document Volume 1 – Dwellings (2022 edition) – For use in Wales: Gives guidance on how to comply with Part L of Schedule 1 to the Building Regulations and the energy efficiency requirements for dwellings.

The minimum energy performance requirements shall be approved and expressed following the methodology for:

- New buildings, in the form of target CO_2 emission rates;
- New buildings in the form of target primary energy rates; and,
- A new dwelling must also meet the Target Fabric Performance Values for elements of the fabric and a Minimum Energy Efficiency Rating for fuel cost affordability.

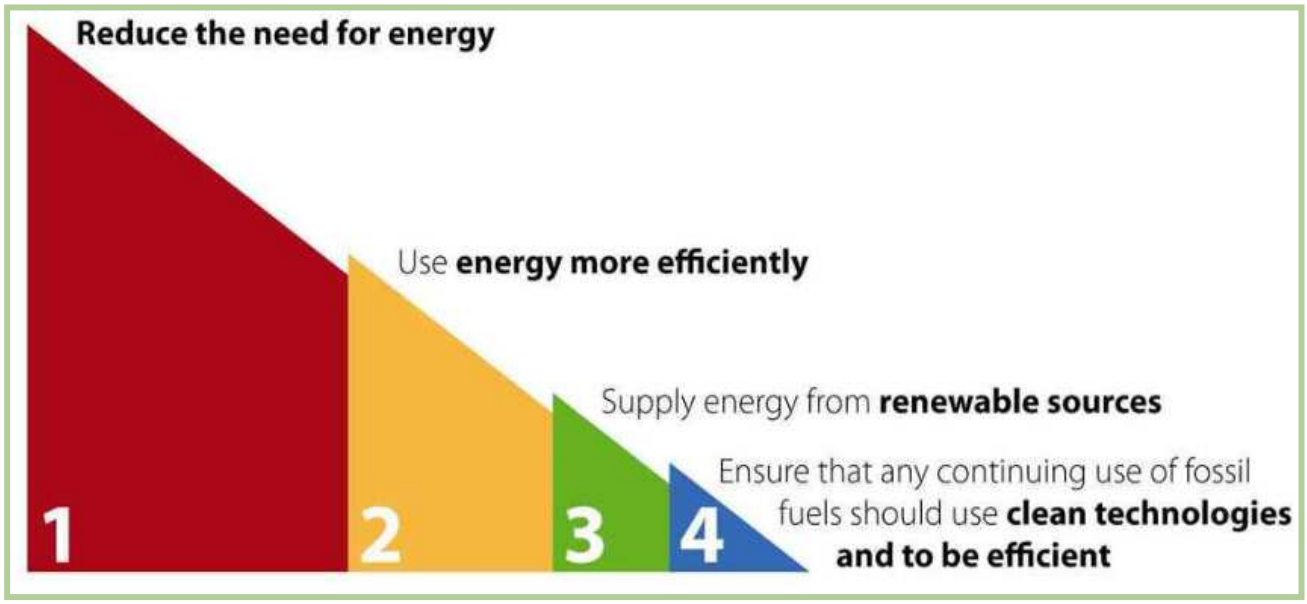
4. SUSTAINABILITY STATEMENT

This section provides an appraisal of the proposals and details the proposed approach, design features and specifications which will contribute to reducing the environmental impact of the scheme.

4.1 Energy Improvements

The Energy Hierarchy provides a framework to guide energy policy and decision-making to achieve practical and cost-effective carbon emission reductions. The proposed scheme will use the Energy Hierarchy model as a guiding framework to prioritise design-driven measures to reduce energy demand in the first instance:

Figure 4.1 – The Energy Hierarchy



First Principle:

The energy strategy proposed for this scheme will focus on a holistic and multi-faceted approach to improving the buildings' performance by applying a fabric-led approach that will contribute towards improving the building's thermal performance.

This will be potentially achieved through the following measures:

- High-performance thermal insulation (with low U values);
- Thermally efficient, double-glazed windows; and
- Attention to cold bridging junctions.

Second Principle:

The approach taken for this scheme will help to minimise energy demand and associated carbon dioxide emissions and is aligned with the second principle of the energy hierarchy which states that reduction in energy demand should be achieved initially by energy efficiency.

To this effect, the following measures will be considered:

- Low energy and LED lighting;
- Zonal, programmable thermostatic controls; and
- 'A' rated appliances.

Third Principle:

Several alternative renewable energy options will be considered as part of the site-wide energy strategy to ensure the selection of the most appropriate solution is proposed for the dwellings. The following technologies will be assessed:

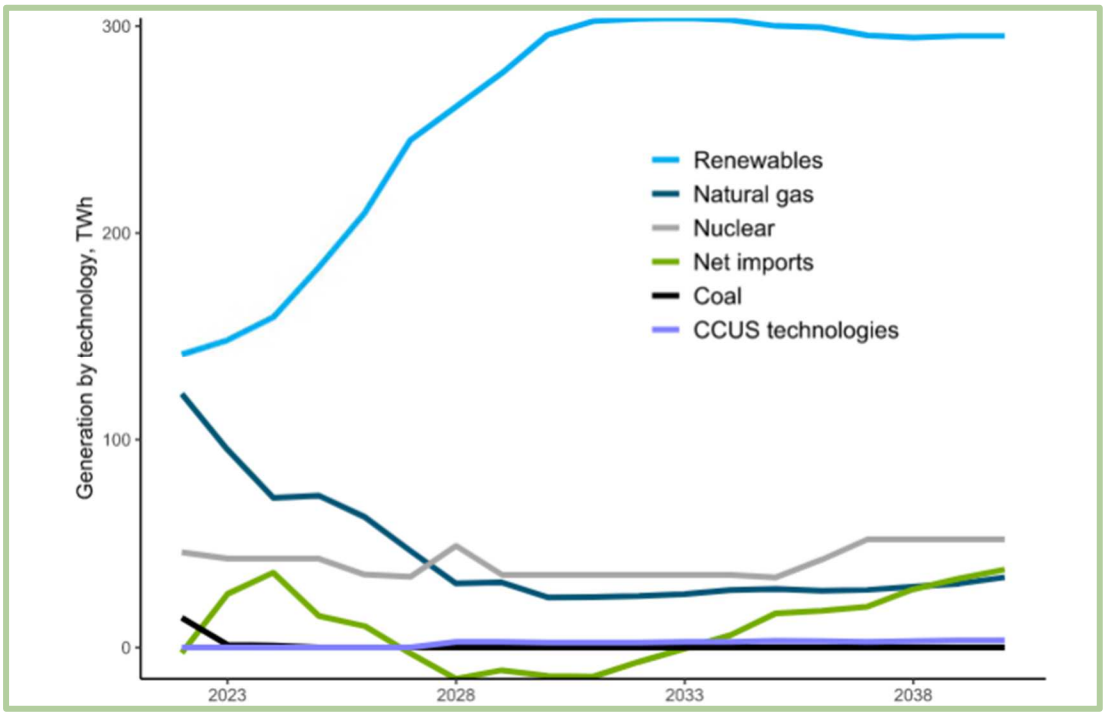
- District heating;
- Solar hot Water (SHW);
- Photovoltaics (PV);
- Wind turbines;
- Air source heat pumps;
- Ground source heat pumps; and
- Biomass heating.

Fourth Principle:

Furthermore, as the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme which will benefit from a 'full electric' energy strategy.

Electricity will experience a steep reduction in emissions by 2035, with the carbon intensity of electricity generation falling by 93% between 2020 and 2035. This is due to the progressive shift away from fossil fuels as demonstrated in Figure 4.2. Electricity is recognised as a less carbon-intensive fuel source than mains gas and other fossil fuels, which is only likely to improve as the percentage of electricity generation from renewable technologies increases.

Figure 4.2 - Electricity generation by Fuel Source, TWh



4.2 Water

The proposed development will be designed to reduce mains / potable water consumption and will include the following water-efficient designs and equipment:

- A water efficiency strategy will be determined for the site and will include the provision of 'A' rated appliances as a minimum;
- To reduce water demand, the sanitary fixtures will be specified to achieve a calculated daily consumption of <110 litres/person/day;
- A water meter on the mains water supply to the building will be specified to monitor and manage consumption.

Efficient water fixtures will be specified throughout the properties such as low flow taps and dual flush WCs in order to reduce water consumption.

4.3 Waste Management

4.3.1 Construction Waste

Best practice techniques to prevent and minimise waste during the design and construction phases of the development will be adopted, as follows:

Before the commencement of the above-ground construction phase, a site waste management plan (SWMP) will be produced by the developer to limit the on and off-site environmental impacts of construction. The SWMP will detail:

- Recycled and secondary materials;
- Waste reduction;
- Waste segregation;
- Waste recovery; and
- Waste disposal.

The scheme will promote the minimisation of waste arising in site development and seek to maximise the use of recycled materials in construction.

4.3.2 Operational Waste

The operational waste strategy for the scheme focuses on the segregation of waste at source, to maximise the potential for the residents to recycle. All residents will be informed on collection frequency, as well as guidance on local recycling facilities to assist with the management and storage of waste.

The proposed waste management strategy has been developed in compliance with the policies of the Canterbury Council to optimise recycling rates:

- Waste will be segregated at the source with the help of split bins to receive multiple streams of waste – general, recyclables and compost;
- Residents within the apartments will be responsible for moving their waste to the closest refuse store;

- The building management company will transfer the waste generated to the designated refuse area, to be collected by refuse operators on the designated collection day; and,

In accordance with Policy MW5, adequate facilities and space for collection, composting and recycling of waste materials will be provided.

4.4 Materials

The proposed development will contribute towards making more efficient use of non-renewable materials resources and reducing the lifecycle impact of materials used. This is demonstrated by:

- Materials will be sourced following a Sustainable Procurement Plan (SPP). A SPP includes sustainability aims, objectives and strategic targets to guide procurement activities;
- Responsibly sourced materials from suppliers operating an Environmental Management System and procuring timber verified by either the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification standard (PEFC) will be prioritised;
- Material selection will be carefully considered to avoid the use of toxic materials, such as Volatile Organic Compounds (VOCs) and contribute towards creating a healthy indoor environment; and,
- Local sourcing of construction materials where feasible and viable will minimise the impact of carbon dioxide emissions associated with the transportation of materials.

Materials with a low environmental impact throughout their life cycle will be prioritised. Plus, materials with associated Environmental Performance Declarations (EPDs) will be favoured.

4.5 Ecology and Biodiversity

- From a landscape and visual perspective, the site contains no rare, notable or unique landscape features and would not be considered to represent a 'Valued Landscape' in terms of paragraph 174a of the NPPF (2023);
- Existing vegetation will be retained and enhanced on-site where feasible;
- A Phase 1 Habitat survey will be undertaken for the site (and adjacent areas) by suitably qualified professional(s) to identify legally protected and/or notable species and their habitats present at the site. The survey will also include the identification of any non-native invasive plant species; and,
- The recommended mitigation measures from the ecologists will be integrated with the design proposals.

Additional native hedges and trees will be proposed, in keeping with the local character of the surrounding area.

4.6 Transport

4.6.1 Walking / Cycling

- The spine road running through the southern part of the site will have segregated shared footway/cycleway provision along at least one side of the road;
- New cycle routes within the site will ultimately provide for north-south connections linking Bryn Estyn Road with Cefn Road, as well as providing the active travel link to KSS2 North via the link road;
- Connections will be provided from the site to Bryn Estyn Road for pedestrians and cyclists. This will enable a convenient connection to the cycle route along Bryn Estyn Road which links to Wrexham Industrial Estate to the east;

4.6.2 Vehicles

- Electric vehicle charging points will also be provided which will encourage the use of more environmentally friendly vehicles;

4.6.3 Public Transport

- Wrexham is served by two railway stations, Wrexham General Station and Wrexham Central Railway Station which are within close proximity to the site;
- The development proposals will integrate well with the surrounding active travel networks, providing several new routes for these road users to access the site and travel safely through the site.

Due to the site's proximity to local amenities and the presence of public transport services within easy walking distance, **the site is considered to be well located to encourage trips to be made on foot, bicycle or via public transport.**

4.7 Flood Risk & Drainage Strategy

The drainage strategy proposes surface water runoff be collected within a gravity network via a combination of rainwater pipes, porous paving, rain gardens, swales and highway gullies.

The proposed site is deemed **not to be at risk from flooding from rivers** or seas, as the desktop study indicated that **the site is located within in Flood Zone 1**, and therefore has a **low probability of flooding**.

5. CONCLUSION

This statement has reviewed the sustainability performance of the proposed residential scheme against national and local planning policies. From this it is clear that the proposed scheme will comply with the requirements stipulated within Future Wales National Plan, PPW, the relevant TAN's and the Wrexham Local Development Plan, and the following conclusions may be drawn from the review are as per the following:

- The energy strategy will focus on a holistic and multi-faceted approach to improving the dwellings' performance by applying a **fabric-led approach** and through the inclusion of highly efficient mechanical and electrical systems.

- As the **UK electricity grid's CO_2 footprint continues to improve**, so too would **the carbon dioxide emissions associated with the operational phase of the proposed scheme which will benefit from a 'full electric' energy strategy.**

- The most appropriate low carbon / renewable energy technology will be installed in line with **Policy RE1: Development and Renewable Energy/Low Carbon Technology**.

- **Water consumption will be minimised** through the specification of efficient water fixtures.

- Due to the site's proximity to local amenities and the presence of public transport services within easy walking distance, **the site is considered to be well located to encourage trips to be made on foot, bicycle or via public transport.**

- **Following Policy MW5,** adequate facilities and space for collection, composting and recycling of waste materials will be provided.

- A **site waste management plan (SWMP) will be produced** by the developer to **limit the on and off-site environmental impacts of construction.**

- **The proposed site is located within Flood Zone 1** and is therefore not considered to be at risk from flooding.

In conclusion, the proposals reviewed within this statement for the proposed Erlas Park scheme in Wrexham will deliver a highly energy-efficient and sustainable development, providing a quality development that accords with the guidance provided within the council's adopted planning policies.