

GREEN INFRASTRUCTURE STATEMENT



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1. **Project Scope**

A Green Infrastructure Statement is required on all developments, following Planning Policy Wales - PPW12 and the Environment (Wales) Act 2016 Section 6 duty, to show that development has a net benefit to biodiversity and green infrastructure. At the heart of the Wales Spatial Plan is 'improving wellbeing and quality of life by integrating social, economic and environmental objectives in the context of more efficient use of natural resources'.

The Wales Spatial Plan is built upon five themes, all of which are supported by Green Infrastructure. The "Valuing our Environment" theme is particularly relevant when considering how the region's green infrastructure can contribute to implementing the Spatial Plan vision for South East Wales. The Valuing our Environment theme focuses on:

- High quality urban living and close proximity to stunning countryside
- Managing development pressures to safeguard and enhance the high quality countryside
- Sustaining and developing places that are safe for people to walk and cycle, and reducing crime
- Protecting environmentally sensitive areas, such as the Gwent Levels
- Identifying opportunities to manage, restore and create other sites which will safeguard and enhance the area's biodiversity
- South East Wales as a networked environment region.

Newport Green Infrastructure Assessment (2022) prepared by Newport City County Council report and is an evidence based strategic approach to the planning of Green Infrastructure networks.

In simple terms the Green Infrastructure is a network of green spaces and natural elements, which provides multiple benefits for people and nature. It comprises numerous individual components, including open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage and open countryside. Individually these elements are GI assets and when appropriately planned, designed and managed, they have the potential to deliver a wide range of social, environmental and economic benefits.

The GI Assessment identifies the main socio-economic and environmental challenges for Newport, and highlights how Green Infrastructure can help address these through the multiple benefits it provides, including: Health and well-being, Biodiversity and ecosystem resilience, Climate change and sustainability, Social cohesion, Economy and lastly the Sense of place.

The study also identifies at a strategic level, places with needs and opportunities for improving the condition or extent of existing Green Infrastructure assets and networks, or creating new Green Infrastructure. The findings should be read in conjunction with the Newport City Council's Green Infrastructure Assessment, which identifies site-specific Green Infrastructure opportunities and nature-based solutions within the heart of the City.

The Green Infrastructure Assessment provides a basis for developing a Green Infrastructure Strategy for Newport, including a project delivery plan with priorities for action identified in consultation with local stakeholders.

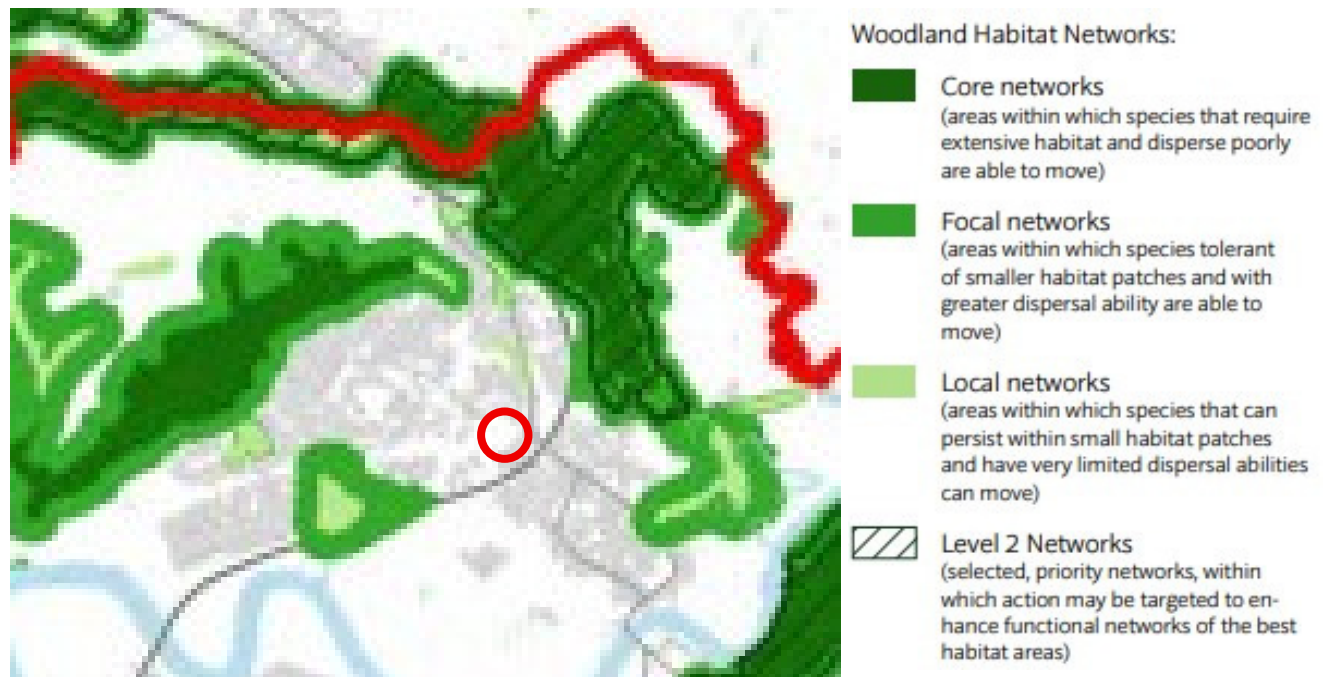


Figure 1: Newport GI - A3 Northern Woodland and Habitat Networks (2022)

The SLD Green Infrastructure Statement report seeks to outline the current GI situation both within the development site boundary as well as within the study area. The GIS report will then outline the proposed green infrastructure features that would safeguard and enhance the current situation.

2. On-Site Green Infrastructure Assets

The existing site is currently part of the local green network connecting the development site to the local streets, neighbourhood and wider landscape. The GI Assessment prepared by Newport City Council indicates that the development site and local streets and neighbourhood do not appear in the 'GI A3 Northern - Woodland and Habitat Network (2022)'.

Non the less, every green space, both private or public, is vital to the wider green infrastructure connectivity. The development site comprises front and rear gardens and hard standing for car parking and outdoor patio area. The rear garden provides more opportunity for inclusion within the wider GI network with a mix of lawns, amenity planting but also an eastern boundary of mature native trees.

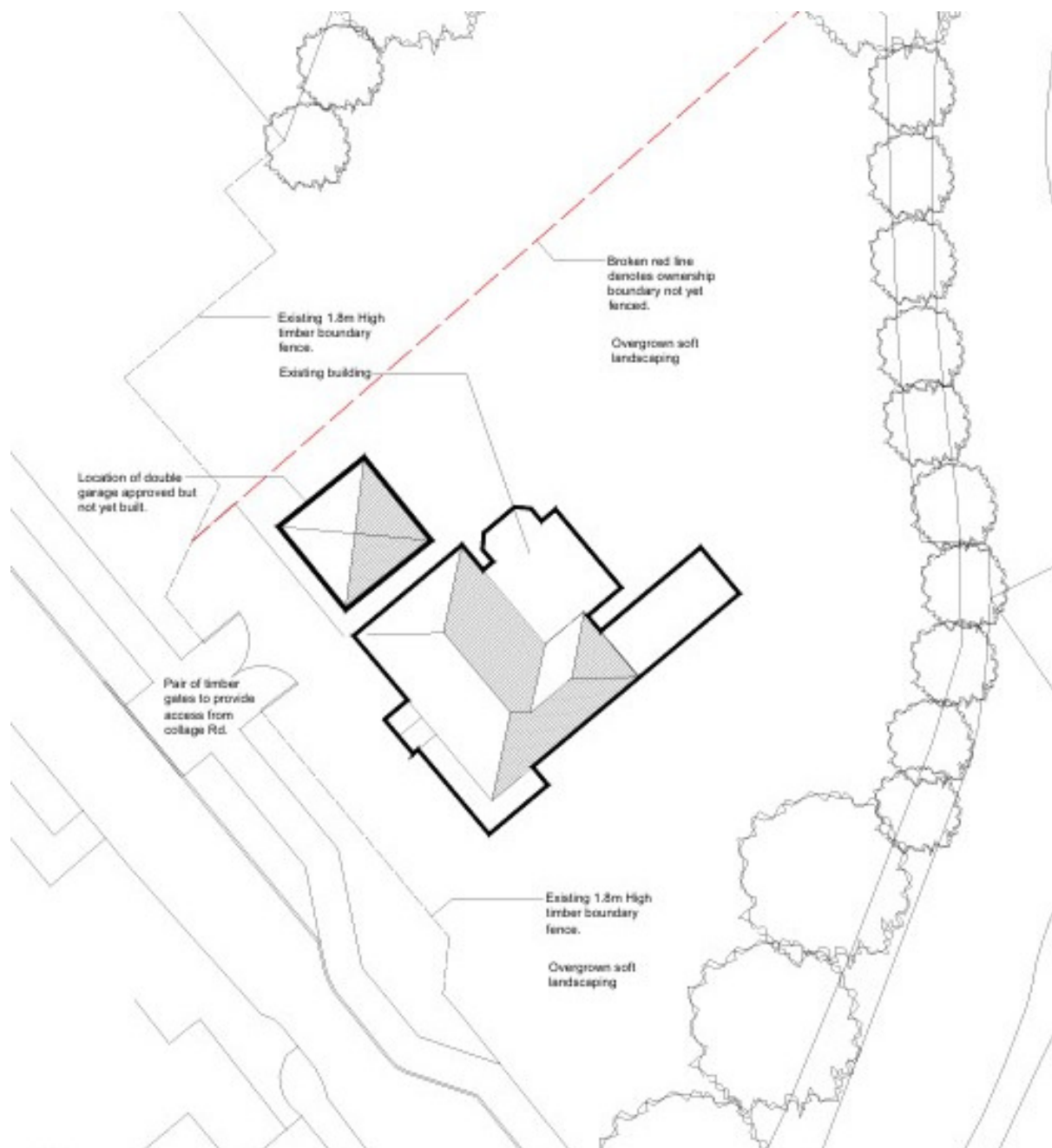


Figure 2: Existing Block Plan PP03

3. Local Green Infrastructure Assets

GI assets include the natural elements which provide social, environmental or economic benefit. They can be specific sites or broader environmental features within and between rural and urban areas. A useful approach to outlining the different types of GI asset is to classify them according to the spatial scale at which each would typically be found.

Connectivity between different GI assets will help maximise the benefits that they generate. This connectivity can be visual or notional; however physical connections make the most impact. This connectivity can enhance public engagement with the natural environment, improve opportunities for biodiversity migration and assist in encouraging sustainable forms of travel.

The Development site is set within an urban area of Caerleon with very few local green spaces or networks, however, to the south and east are the tree lines railway line and Afon Lwyd which provide a significant green asset.



Figure 3: Green Infrastructure - Local Area

GI functions are the roles that assets can play if planned, designed and managed in a way that is sensitive to, and includes provision for, natural features and systems. Each asset can perform different functions, a concept known as multifunctionality. Multifunctionality Understanding multifunctionality is central to the GI approach to land use planning. Where land performs a range of functions it affords a far greater range of social, environmental and economic benefits than might otherwise be delivered.

Underpinning the multiple functions that GI assets perform is the concept of ecosystem services. Health and wellbeing depends on the range of services provided by ecosystems and their constituent parts: water, soils, nutrients and organisms. These services include: support: necessary for all other ecosystem services, e.g. soil formation and photosynthesis; — provision: food, fibre, fuel; regulation: air quality, climate control, erosion control; and culture: non-material benefits for people, including aesthetic qualities and recreational experiences.

A GI Statement has been prepared to consider the effect of the building extension within a study area which is mainly urban in character and containing many man-made structures, railway line roads and residential areas of Caerleon and Newport.

This Green Infrastructure Statement will show how the existing green infrastructure and biodiversity will be protected and enhanced by following the following steps.

Step 1: Avoidance – The building extension would be constructed on the footprint of the existing conservatory and away from the mature boundary trees which would retain, protect and maintain the vast majority of on-site trees.

Step 2: Minimise – The construction of the building extension, has only removed the existing conservatory with no reduction in trees.

Step 3: Mitigation measures – There would be a variety of planting areas including tree planting, hedgerow, amenity shrub and perennial planting as well as amenity grass lawns.

Step 4: Compensation on Site/ off Site – There is no loss of trees due to the construction phase of the development there would be further enhancements with a mixture of new hedgerow, trees and amenity shrub planting within the front and rear gardens.

These improvements within the development site would increase biodiversity on site.

4. Green Infrastructure Corridors

The development site is located within Caerleon and within the wider urban sprawl of Newport City.

Within the wider countryside the majority of the land is taken up by urban residential areas but also linear green connections including adjacent private gardens linear tree lines along the railway line and green assets within the Afon Lwyd with woodland blocks, grassland fields etc.



Figure 4: Aerial image of the wider Green Infrastructure Assets

5. Opportunities for Enhancement of Green Infrastructure

The step wise approach to providing opportunities for infrastructure enhancements can be provided in the following measures.

- **Diversity:** maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits. The proposed enhancements include the provision of new wild flower grassland and additional 'infill' hedgerow planting using locally sourced native species which would improve the species diversity of the hedgerow.
- **Extent:** incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats within the Afon Lwyd corridor. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance.

The proposed hedgerow, tree and amenity garden planting would provide linkage between onsite GI assets and those in the neighbouring and wider countryside.

- **Condition:** The condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer-term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc.

Within the development site, the on going / future management of the hedgerows, trees would enhance the site for local fauna using these GI assets for foraging, nesting and roosting etc.

- **Connectivity:** This refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources.

The development site would provide enhancement measures / opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.

- **Aspects of ecosystem resilience (adaptability, recovery and resistance):** ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

The provision of a variety of landscape habitats would increase adaptability and resilience for local ecosystems. the newly planted hedgerow would provide an ecological resource and provide connectivity between on-site boundaries and the wider countryside.



Figure 4: SLD Drawing 220 200 Landscape Plan

Green Infrastructure Management

The management and maintenance of the existing Green Infrastructure assets within the client ownership would be to maintain the existing trees through regularly management ensure that they continue to provide an ecological resource as well as a visual barrier.

New GI hedge planting will be protected against rabbit damage with the use of tree/shrub guards and stakes and where required fencing. and removed in season three or season four depending of sufficient growth etc.

With these additional GI additions and GI management in place, the development site would continue to be part of the local green connectivity and function as part of the valued GI resource in the local countryside.

6. Green Infrastructure Trends and Constraints.

As the boundary tree and hedgerows continue to mature there will be occasion to carry out work to the hedge and it may require formal 'layering' to ensure that the field continues to match the local hedge character of the local area.

Similarly, the trees may suffer complications of old age or storm damage and may require removal. If this is necessary then a similar species tree (preferably 'standard' size) should be planted in its place and protected with tree guard and staking etc.

NOTE: All birds are protected by the Wildlife and Countryside Act 1981 and the protection also covers their nests and eggs. To avoid breaking the law, do not carry out work on trees, hedgerows or buildings where birds are nesting. The nesting season for most bird species is between March and September.

The management of the Green Infrastructure Assets should be carried out on a yearly bases with a least two cuts of the hedge per year and regular yearly inspection of the existing hedgerow and trees, or after a storm event etc. with any remedial works to be carried out after the bird nesting season.

Every ten years, the management prescriptions should be re-assessed in order to identify significant changes that would affect the field boundaries to continue as a local Green Infrastructure Asset. Any identified changes should be implemented in the following appropriate season.

It is anticipated that the implementation of the GI management tasks would be carried out by the client or landscape contractors working on their behalf.

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