

GREEN INFRASTRUCTURE STATEMENT APPLICANT: Lewis Homes



Introduction

dp landscape architecture [DPLA] have been commissioned by Lewis Homes to provide a Green Infrastructure Statement in accordance with the requirements set by the latest version of Planning Policy Wales to support the proposed residential development, located off Sandy Lane, Ystradowen. An assessment of the existing landscape and surrounding context was undertaken on 31st May 2023 by Dan Patterson BA [hons] DipLA MLI. The assessment comprised a site walk-over and brief desktop study.

Edition 12 of Planning Policy Wales, the latest version of the framework, was published in February 2024. PPW is the principal national planning policy document which sets out the land use policies of the Welsh Government, the main thrust of which is to ensure that the planning system contributes towards sustainable developments. The latest version imposes a duty on competent authorities such as Caerphilly County Borough Council to conserve and enhance biodiversity, and introduces a requirement for all planning applications to be accompanied by a green infrastructure statement. Specifically, para 6.2.12 states that:

“A green infrastructure statement should be submitted with all planning applications. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal. In the case of minor development this will be a short description and should not be an onerous requirement for applicants. The green infrastructure statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach (Paragraph 6.4.15) has been applied.”

The purpose of this Statement is therefore to set out the Green Infrastructure proposed as part of this planning application, and demonstrate how this is to be incorporated into the proposed development. It should be read in conjunction with DPLA drawing; 1179.01; Soft Landscape Proposals.

Existing site

The existing site is located on the north east edge of Ystradowen with an access off Sandy Lane. The sloping site mainly comprises existing grassland with trees and hedgerows along its boundaries. It is bounded by existing trees to the north, an existing hedgerow to the east, the existing residential properties off Sandy Lane and Badgers Brook Rise to the south and the existing residential properties of Badgers Brook Close to the west.

The existing notable landscape and GI features include the substantial area of 'poor semi improved' grassland, mature trees along the northern and part of the western boundary and the hedgerows to the east and south, along Sandy Lane. The grassland occupying the site will be lost as part of the development. Whilst this is noted as being of poor quality, its loss will nevertheless need to be properly mitigated. The hedge along Sandy Lane will be relocated and the mature trees and other hedges will be retained.



The site will be enhanced by the introduction of new native tree planting as well as native hedging, new shrubs, plants known for wildlife value, wetland plant mixes and other habitat types.

View west from the site looking at the existing residential properties on Sandy Lane and Badgers Brook Close.

Green Infrastructure Strategy

Green Infrastructure (GI) is defined by Planning Policy Wales as a “network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places”. This can include natural habitats ranging from grasslands, wetlands and woodlands to parks, open spaces, playing fields, street trees, rain gardens, allotments and private gardens”.

Due to the nature of the proposed development, a large proportion of the site will be taken up by the residential properties and the associated access roads and parking, however the new layout creates a series of spaces for soft landscaping and these areas will be maximised to meet the GI objectives.

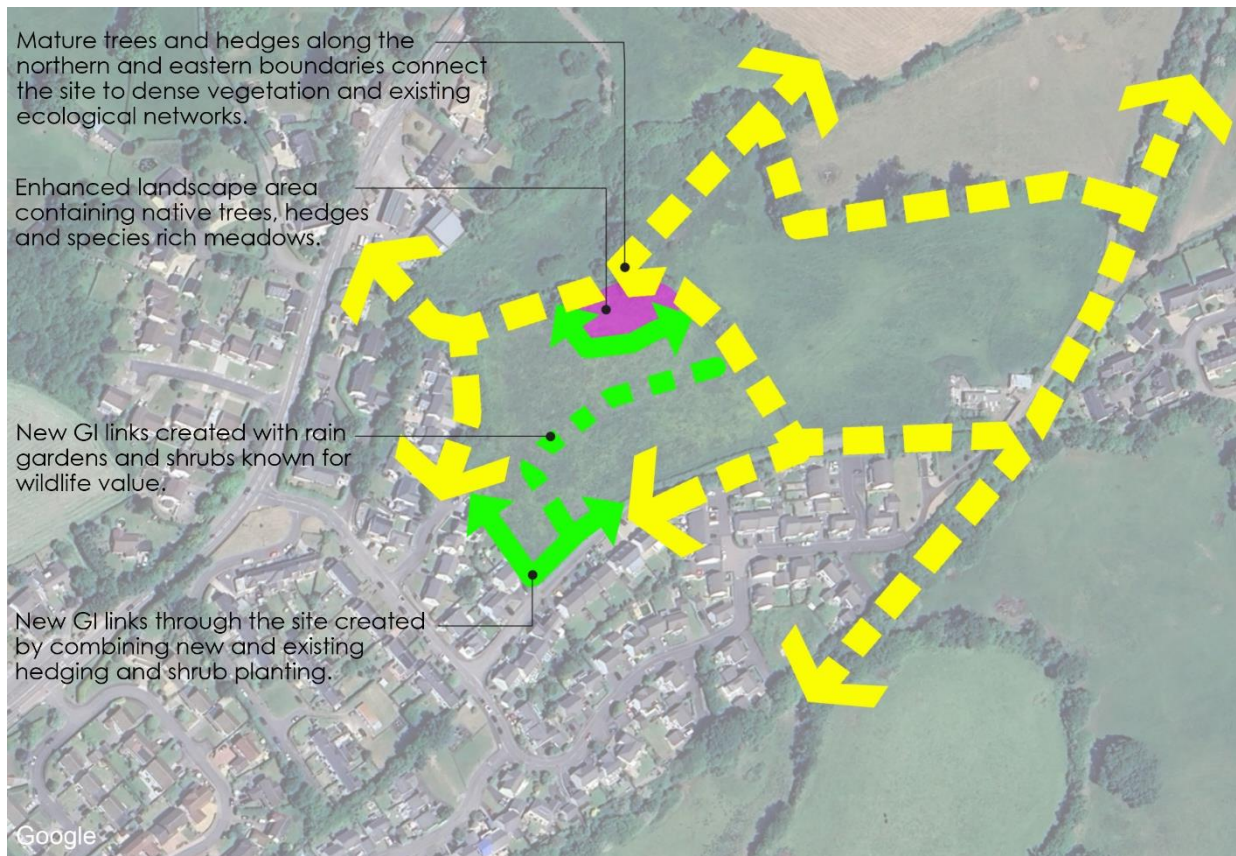


Figure 01 – Design Principles.

The site benefits from the existing vegetation located along each of its boundaries which connects directly to the wider ecological and GI network, as indicated in Figure 01 above.

The significant trees located partly on the western boundary and all along the northern boundary, together with the existing hedge forming the east boundary, will be retained and enhanced as part of the landscape proposals.

The existing hedge along Sandy Lane will be relocated as part of the development proposals. Whilst not counting this as a 'loss', it must be acknowledged that its relocation will at least be a temporary reduction in GI and ecology. Therefore, as well as the relocation of the hedge, a new hedge as well as occasional hedgerow trees will also be planted along the same length in order to mitigate the temporary loss and contribute positively to the new habitats being created.

The remainder of the soft areas on the site will also be enhanced by the introduction of new native tree planting as well as new shrubs, plants known for wildlife value, wetland plant mixes to rain gardens and other habitat types.

This report uses the following five principles of Green Infrastructure as a guide to inform the landscape design to ensure the landscape maximises the benefits to people and wildlife.

The five principles:

- Multi-functional
- Adapted for Climate Change
- Healthy
- Biodiverse
- Smart & Sustainable

Multi-functional:

The landscape design includes a range of GI features for the benefit of people and wildlife. These include native tree planting to improve amenity as well as providing summer shade and a food source for wildlife.

The planting design includes ornamental shrubs and those that are known to support wildlife. This will improve amenity and tie in visually with the adjoining landscape. This planting also provides safe routes through the site for mammals and foraging opportunities for local fauna.

Street trees, shrub planting and rain gardens are proposed to provide GI links through the site.

Finally, a substantial SUDS feature is proposed in the north east corner of the site. This will contain parts of the relocated hedging, new hedging and a species rich grass and wildflower mix.

The combination of the above measures will enhance biodiversity across the site and demonstrates every effort is being made to create a multi-functional landscape.



Landscape features to benefit people and wildlife.

Adapted for Climate Change:

The drainage design for the site includes a Sustainable Urban Drainage System. [SUDS]. The design comprises a series of rain gardens and an attenuation basin as mentioned above.

This gives us an excellent opportunity at surface level to create rich wetland and grassland habitats capable of holding water on site. This will improve and manage water quality, enhance biodiversity as well as providing amenity for the people using the site.



Rain Garden planting.

Healthy:

The underlying principles of the landscape design for the site are to create an attractive setting for the new development for the benefit of all users.

This will be achieved by retaining and enhancing existing landscape features where possible and introducing new native tree and shrub planting as well as native hedging as described earlier.

The combination of the above GI features will contribute positively to the amenity of the site and to the wellbeing of those who live there and / or visit.

Biodiverse:

The planting scheme includes a large number of native species and species noted for wildlife value. These features include trees, shrubs, hedges and wetland habitats across the site.

The existing planting infrastructure to the west, north and east will be retained and enhanced. It will also be maintained to ensure a healthy biodiverse site in the long term, which in turn will benefit local ecosystems and the wellbeing of people.

In addition to the habitats created through the planting design, the site will also include other ecological measures. Bat and bird boxes and invertebrate refugia will be provided and will be installed on the new buildings. The exact number and locations to be determined by others.



Bat / bird boxes and invertebrate refugia.

Smart & Sustainable:

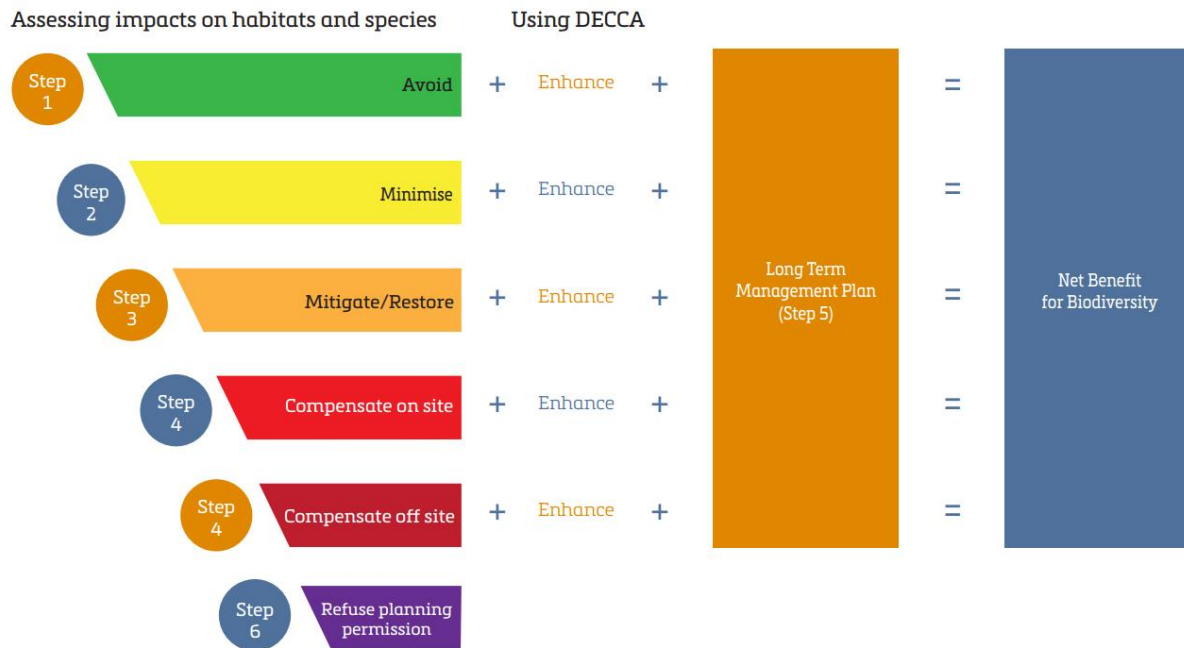
The planting design for the development has been carefully considered to ensure that it is not reliant on artificial irrigation.

The only exception to this could be during the establishment period, where, during periods of prolonged dry weather, the young plants may require some watering to prevent loss and to aid their successful establishment. In these circumstances, the watering should be carried out using harvested rainwater where possible.

Demonstrating Net Benefits for Biodiversity [NBB]

The landscape proposals demonstrate that they have both maintained and enhanced biodiversity and built resilient ecological networks. The biodiversity enhancements described above, achieve NBB by following the Step-Wise Approach of firstly avoiding, then minimising, mitigating and as a last resort compensating for, adverse impacts on the environment in a development.

Figure 12: Summary of the Step-Wise Approach



Summary of the Step-Wise Approach taken from Planning Policy Wales. 12 Edition – February 2024.

The examples of using the Step-Wise Approach are evident within the design for the site. The removal of existing vegetation has been avoided where possible, for example along the northern, eastern and western boundaries.

Some removal of existing vegetation has been unavoidable, such as the existing hedge along Sandy Lane, which is being removed to accommodate the widening of the highway and the inclusion of the 2m wide footpath. Whilst this removal cannot be minimised, it is being mitigated by the translocation of the existing hedge, along with the introduction of new hedge planting along its length and other ecological measures to ensure the appropriate restoration of habitats.

The mitigation measures for the scheme have been included within the site and these are noted clearly on the drawing, demonstrating that all attempts have been made to compensate on site.

The NBB's for the site have been achieved through a range of actions, ranging from installation of bat and bird boxes to the creation, and/or management of habitats. The landscape proposals for the site are proportional to the extent and impact of the development and contribute to a resilient and biodiverse ecological network on the site.

Landscape Proposals

An extract of the soft landscape proposals drawing is copied below and clearly describes the design intent for the planting areas.



Figure 02 - Extract from DPLA drawing 1179.01

Key measures include:

- Native tree planting around the site. This provides an attractive setting for the development and adds to the existing landscape infrastructure.
- The retention, protection and enhancement of the existing vegetation to the west, north and east. This provides natural boundaries and maintains important ecological links.
- Shrub planting including species known for wildlife value. This softens building frontages and enhances biodiversity.
- The inclusion of rain gardens provides amenity and creates important ecological habitats.
- Native hedging to supplement the relocated hedging links existing Green Infrastructure and provides a food source and nesting opportunities for birds.
- Wildflower meadow mixes to SUDS features further enhances biodiversity on site.

The combined effect of the above measures will be the creation of a species rich landscape, appropriate to the scale and nature of the proposed development.

Conclusion

The existing landscape has been assessed and important existing features have been identified. All endeavours have been explored to ensure that key features will be retained and enhanced where possible and as appropriate, as part of the new landscape proposals for the site.

The impact of the new development will be mitigated by creating new planting zones, hedges and other landscape features, which will improve biodiversity, provide important ecological habitats and enhance the amenity value of the site as per the requirements of PPW.

The successful establishment of the landscape design for the site will provide a network of healthy, multi-functional and biodiverse green spaces, capable of delivering a wide range of environmental and quality of life benefits for people and wildlife.