

A COHERENT APPROACH TO LANDSCAPE

In addition to the development of the buildings and historic structures in Gnoll Estate Country Park, Davies Landscaping have undertaken a review of the landscape of the parkland. This ties the interventions together. The parkland is the primary surviving element of the historic development of the parkland and consequently the principal, tangible connection with the beginnings of Neath and the wider area. It contains the remnants of many of the early industrial processes that allowed the town to develop and subsequently tracks the evolution of industry in the 18th century within its boundaries.

The landscape proposals look to re-connect the park with these historic entities. Central to this of course is Gnoll House as the focal point of the estate. In response to this new paths are proposed to connect from the existing primary point of arrival at the Visitor Centre with this area, together with the reinstatement of the former carriageway key approach to the House. This will be highlighted by a lift in hierarchy of the finished surface in this area, with the introduction of a resin bound surface.

Elsewhere, key vistas that were part of the landscape are to be protected and re-opened. This includes a view from the proposed Visitor Centre to the Ivy Tower, and is particularly critical with regards to the axis between the House and the cascades, and consequently some clearance is required to reinstate this.

With regards to the ongoing sustainability of the parkland, the proposals for woodland management will address issues relating to invasive species and ensure that well-structured and biodiverse woodlands are developed for the future. By creating multi-layered woodlands that include

understorey and ground layer vegetation, drainage flows will be slowed, which in combination with the work being done by the Woodland Trust in the upland area above Gnoll Estate Country Park, will help alleviate flood risk downstream.

The principle of maximising biodiversity and the habitat potential of the parkland will be adopted for any new landscape works, ensuring that proposals are sensitively designed and incorporating locally appropriate native species throughout. Appropriate sustainable drainage schemes will be incorporated into all new landscape works. The landscape proposals will also ensure that opportunities are taken to utilise existing resources and materials on site, as opposed to importing new materials in. For example, existing play equipment will be retained and supplemented with new play areas, and site-won timber from woodland management works can be used for informal play elements, informal seats and other uses.



ECOLOGY AND BIODIVERSITY

Designations

Gnoll Estate Country Park is designated a Site of Importance for Nature Conservation (SINC) (NPTSINC036) by the Local Planning Authority through the Local Development Plan (2011- 2026). Gnoll Estate Country Park is a Grade II* designated parkland.

Ecology

To inform detailed design proposals, an extended Phase 1 habitat survey has been undertaken across areas that will be affected by the development. This supplements existing known information. The surveys assess the habitats currently present on site and identify any further surveys that are recommended. This has been supplemented by detailed analysis and mapping of key interventions including consideration of existing woodland structure, ground flora and shrub layers. This level of detail will ensure that proposals are fully integrated within their existing natural setting whilst sensitively managing and enhancing habitats and features. Completed surveys have informed the proposed detailed designs, which include appropriate landscape mitigation and compensation.

The Phase 1 habitat survey site was carried out in accordance with the standard methods set out in JNCC (2010). This encompassed the project site and the immediately surrounding habitats that could be safely accessed or viewed. Habitats were mapped and features of ecological value recorded. Any evidence of protected or non-native invasive plant species were also noted.

The surveys have been extended (in line with the CIEEM Guidelines for Preliminary Ecological Appraisal (2017)) to include an assessment of the suitability of habitats to support protected fauna and note the presence of signs of any protected fauna or those of conservation concern. This is all captured in the Preliminary Ecological Appraisal and Bat Surveys that support each application for the various elements of the park.

Wherever possible the detailed design proposals have been adapted to suit the ecological sensitivities identified through the site surveys with the aim of keeping ecological impacts to an absolute minimum. For example, the scheme will be adjusted as necessary to avoid the removal of any moderate or high bat roost potential trees.

For each element of the project a Construction Environmental Management Plan (CEMP) has been produced to cover ecological mitigation measures in relation to the particular habitats, any protected species and the proposed works.

The CEMP report provides details of ecological mitigation measures to be implemented prior to and during construction to protect and mitigate effects on important ecological features within the site. This will include measures to prevent impacts from accidental spillages, dust, sediment inputs, movement of machinery, refuelling etc.

Arboriculture

In addition to the extended Ecological surveys, an arboricultural impact assessment has been undertaken of the project sites to record information on all trees and hedges on, or within influencing distance of, the proposed development areas, in accordance with BS 5837.

The results of the site survey and associated desktop searches has been provided in the form of a Tree Constraints Plan showing tree locations, canopy extents, Root Protection Area (adjusted to reflect site conditions and constraints to root growth) and tree quality categorisation for the site. Full survey data and management recommendations in response to any existing or developing defects, hazards and opportunities are also noted.

The initial results of the survey and desktop searches are provided in the form of a Baseline Plan detailing tree locations, their canopy extents, Root Protection Area (adjusted to reflect site conditions and constraints to root growth) and quality categorisation. The plans also include a summary of all desktop search results and a description of the constraints to development presented by the existing trees. This information has been used to facilitate discussion regarding tree retention and removal, and assess the potential impacts on retained trees from the emerging detailed design schemes, with the aim of keeping tree impacts to an absolute minimum and identifying opportunities to enhance.

Following agreement on tree removal and retention, an Effects Plan showing the proposed layout and the existing trees has been produced. It identifies all trees that will be pruned and those that will be removed, including a detailed schedule of works. The plan makes an assessment, in accordance with BS 5837, of the effects on arboriculture from the proposed development.

On the basis of the final tree retention and pruning schedule, a Mitigation Plan for each project has been produced as necessary describing all relevant mitigation measures that are proposed as part of the overall application. It shows trees that will be retained within the proposed development where possible, along with temporary protection measures (ie. tree protection fencing and/or ground protection) that are required during construction. It also identifies any areas in which controlled construction detailing is required and specifies any additional procedural measures that may be required.

Biodiversity Enhancements

The findings of the ecological and arboricultural surveys have been used to inform the detailed design of the landscaping and building proposals.

Key objectives of the landscape proposals are to:

- Protect and enhance biodiversity;
- Implement sustainable drainage systems to improve water quality and prevent water run-off;
- Provide mitigation for the impact of development;
- Achieve Biodiversity Net Gain; and
- Utilise locally sourced plants and materials where appropriate.

Trees identified as trees of landscape and amenity value will be retained where possible to help maintain integrity and maturity of the landscape, and aid integration of the development within the existing site and wider landscape. However, where some tree or vegetation loss is required in order to facilitate the development any tree loss will be offset by new native or wildlife friendly tree planting across the site.