ARUP

Carmarthenshire County Council

Machynys Hotel Outline Planning Application

Green Infrastructure Statement (GIS)

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Contents

1. Introduction

Ove Arup and Partners Ltd. (Arup) has been commissioned by Carmarthenshire County Council (CCC) to prepare this Green Infrastructure Statement (GIS) in support of an outline application, with all matters reserved, for the proposed development of a hotel to the east of Pentre Nicklaus Avenue, at Machynys. The application has been submitted to CCC as the Local Planning Authority (LPA).

The approximate Ordnance Survey National Grid Reference for the centre of the hotel development area (hereafter referred to as the "site") is SS 50874 98320.

Planning Policy Wales Edition 12 (PPW12), section 6.2.12 now states that all developments should submit a Green Infrastructure Statement to describe how the 'Stepwise Approach' has been applied, and demonstrating how Net Benefit for Biodiversity (NBB) has been achieved. The new paragraph 6.2.12(1) states that the GIS 'will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal' and that 'the green infrastructure statement will be an effective way of demonstrating positive multifunctional outcomes which are appropriate to the site in question'.

The Well-being of Future Generations (Wales) Act 2015 also places a duty on public bodies in Wales to carry out sustainable development. In this Act "sustainable development" means the process of improving the economic, social, environmental, and cultural well-being of Wales by acting, in accordance with the sustainable development principle, aimed at achieving the well-being goals. These well-being goals are key for the GIS to consider, along with ensuring that as required by the Environment (Wales) Act 2016 that public authorities to seek to maintain and enhance biodiversity to promote the resilience of ecosystems when undertaking their functions. This includes consideration of species and habitat listed under Section 7 of the Act as those of 'principal importance' to conserving and enhancement biodiversity in Wales (hereafter referred to as Section 7/Priority Habitats and Species).

1.1 Scale and Nature of Proposed Development

The proposed development is described as follows:

"Outline planning application for the proposed development of a hotel and associated infrastructure, with all matters reserved."

The proposal incorporates associated infrastructure and landscaping, including the construction of a car park benefitting from 140no. parking spaces, and the creation of a green space around the hotel's perimeter, designed to provide a net benefit in biodiversity and mitigate potential flood risk. The location and outline application boundary are shown in Figure 1.

Access to the hotel would be provided from the B4304. A new separate dedicated service vehicle access road to the west of the site would ensure that the hotel can be serviced discretely, keeping staff and service vehicles separate from guest vehicles if required. The service access and building levels would be set above minimum levels recommended in the Flood Consequences Assessment to reduce the risk of flooding and to ensure safe access for emergency vehicles at all times.

The area of the application site is 5.56 hectares (ha) and the hotel development area within the site is 1.53ha. The areas of the proposed development are as follows.

- Hotel Footprint = 0.1480ha (1480m^2)
- Hardstanding footprint = 0.6264ha (6264m^2)
- SuDS (marked and proposed) = 0.0843ha (843m^2) + 0.0578ha (578m^2) = 0.1421ha (1421m^2)
- Roof Area = 0.0532ha (532m2) (50% of roof coverage)

The brief for the proposed development is to provide a high-quality destination for visitors to Llanelli, Carmarthenshire, which would support the local tourism economy in a sustainable location and contribute positively to the economic and cultural growth of Llanelli and the wider region. In particular, the proposal

aims to link with the Pentre Awel development site to the north, supporting the proposed well-being and life sciences incubators within the Life Science and Wellness Village.

Key aspects of the design proposal for the GIS are the design of the biodiverse wildflower green roofs (as opposed to sedum), the Sustainable Drainage System (SuDS) design and additional landscaping surrounding the hotel to include trees and grassland. Native species of local provenance will be prioritised and species composition informed by appropriateness for the area and or those beneficial to protected species recorded on site.

Figure 1 Site Location

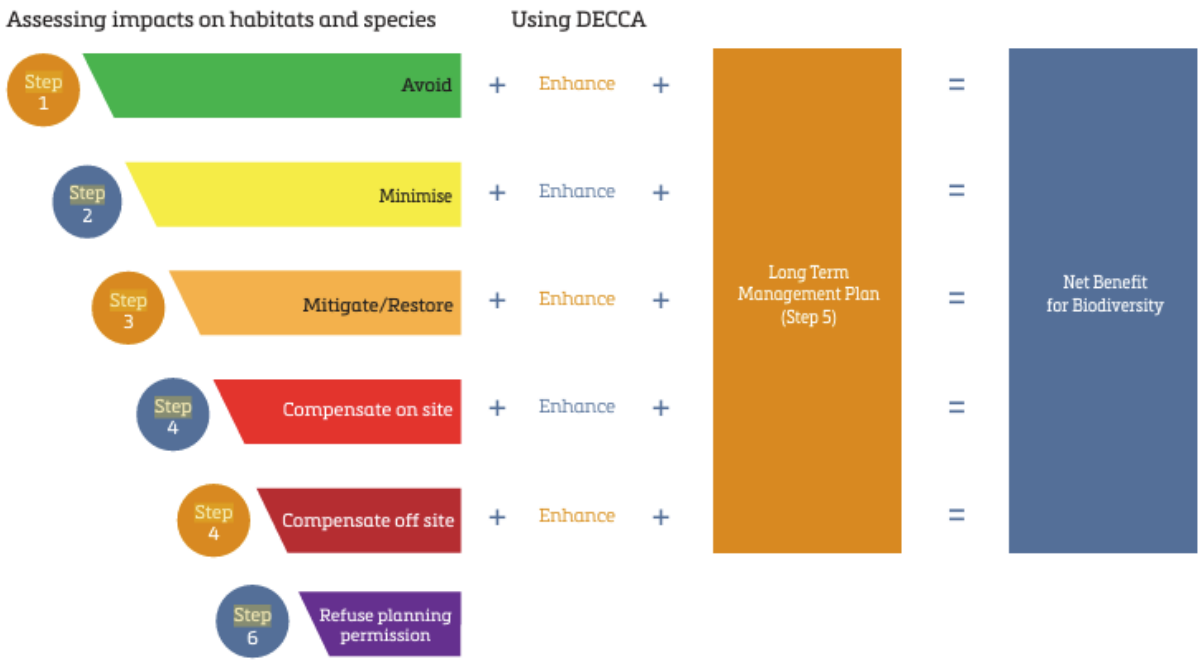
2. Green Infrastructure Features and Stepwise Approach

A Green Infrastructure Statement (GIS) is created in the early stages of a development to establish feasibility and to set out a design concept that delivers Green Infrastructure objectives and policy. This section identifies any features on the development site with ecological and or landscape value and indicates surveys that have been completed to minimise impacts on sensitive receptors.

The figure below is a copy of Figure 12 from the PPW edition 12[1] showing a visual representation of the Stepwise Approach.

[1] Planning Policy Wales Edition 12 (February 2024) Website: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf [Accessed October 2024]

Image 1 Summary of Stepwise Approach



2.1 Ecological Baseline

This section summarises Stepwise Approach taken to the Green Infrastructure design and ecological receptors and how this has resulted in Net Benefits for Biodiversity (NBB). For further detailed information on species, habitats, impact assessment and ecosystem resilience assessment please refer to the EcIA[2] and accompanying drawings.

There are no statutory designated sites within the Application area. Several European designates sites of international value are located approx. 350m away. These are the Carmarthen Bay and Estuaries Special Area for Conservation (SAC), Burry Inlet Ramsar, Burry Inlet Special Protection Area (SPA). The nearest statutory designated site is the Pyllau Machynys (Machynys Ponds) Site of Special Scientific Interest (SSSI) that is situated approximately 225m from the centre point of the hotel development area but only 40m away from the proposed drainage connections to a ditch at the southern extent of the site.

There is one non-statutory site within the site which is a locally valued B-line – which are designated grasslands that form insect pathways with the mission to restore and create wildflower and pollinator rich habitat corridors.

Full results of designated sites and their qualifying features within the zone of influence are detailed within the EcIA.

Surveys for protected species have been carried out at the site to inform this outline planning application between November 2023 and October 2024. Surveys undertaken include;

- Phase 1 Habitat Survey
- National Vegetation Classification Survey
- Arboricultural survey
- Badger survey
- Bat roost and activity surveys

[2] Arup (2024) Machynys Hotel Outline Planning Application, Ecological Impact Assessment (EcIA)

- Bird Surveys (Wintering and Breeding)
- Invertebrate survey
- Riparian mammal (otter and water vole survey)
- Reptile presence/absence surveys

Key habitats or species found to be present at the site or in close proximity to the site that are considered in detail within the EcIA are:

- Priority habitat including MG5 and Open Mosaic Habitat (OMH), that includes notable plant species.
- Bats (Foraging and commuting) included greater horseshoe bats. No bat roosts were recorded but potential roost features in trees will be lost.
- Breeding birds including Schedule 1 species Cetti's warbler breed on site.
- Wintering birds – birds associated with the Carmarthen Bay SPA and Burry Inlet SPA and Ramsar designated sites utilise the waterbodies on the adjacent golf course but are not recorded to use the site itself.
- Section 7 invertebrates; dingy skipper and brown banded carder bee are present on or adjacent to the site as well as rare beetle species.
- Otter associated with the Carmarthen Bay and Estuaries SAC are recorded on the adjacent golf course and likely utilise the site or commuting purposes.
- Water vole are not present at the site but are present in waterbodies on the adjacent golf course.
- Common lizard and grass snake are recorded within the site. Slow worm have previously been recorded.
- Invasive non-native species including Japanese knotweed and Japanese rose are present within the site.

In addition to ecological surveys, under the Water Framework Directive (WFD)[3], all proposed schemes with the potential to impact upon WFD-designated water bodies must be assessed to ensure:

- No deterioration of the current status or potential of any WFD quality elements; and
- No prevention of future attainment of the 'good' status or potential objectives of any WFD quality elements.

The WFD assessment concludes that the development does not result in any adverse effects upon the Burry Inlet (Inner) transitional water body and Burry Inlet (Outer) coastal WFD water bodies or habitats or prevent them from attaining good status in the future.

A Flood Consequences Assessment (FCA) concludes that the risk of flooding for the proposed development is acceptable in accordance with TAN15 Development and Flood Risk. The hydraulic modelling concluded that there is no significant change to the flood risk of third parties as a result of the development.

2.2 Stepwise Approach

2.2.1 Avoid

In order to avoid sensitive receptors, avoidance of impact to biodiversity has been embedded into the early design phase of the hotel where possible. For example;

- The hotel site has been relocated to avoid the flood zone and also avoids wet fen grassland rich in invertebrates as a result.

[3] European Commission. Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.

- The hotel site is located to avoid an area of plantation woodland at the west of the site and will avoid priority habitat MG5 species-rich grassland identified on the NVC survey in the centre of the overall site, for which there is potential to enhance.
- Trees have been avoided where possible through design and retained trees and other vegetation will be protected with appropriate buffers and fencing throughout the construction phase in accordance with the British standards BS5837:2012.

2.2.2 Minimise

Where avoidance of impacts is not possible, mitigation must be implemented to minimise adverse impacts on ecological receptors.

- Best practice construction measures are detailed within the EcIA. They aim to minimise impacts from pollution (dust, air and water), disturbance due to noise and lighting and mortality and injury to species with regard to timing of and safe vegetation clearance methods and good site management and speed limits. Such measures will be detailed in a Construction Environmental Management Plan (CEMP)
- Employment of an ecological clerk of works will be implemented to deliver toolbox talks and to ensure best practices measures are implemented and impacts to retained habitats and protected species are avoided.
- All lighting will be designed to avoid or minimise light spill onto adjacent retained habitats such as treelines, hedgerows and watercourses in order to create dark areas to avoid disturbing nocturnal species such as otter and bats in line with current bat guidance[4]. The light spill from internal lights will also be considered and minimised through the design process. The lighting design will be developed in consultation with an ecologist and informed by the results of the bat surveys
- To minimise the risk of adverse impacts from water pollution events to surrounding watercourses appropriate SuDS features will be designed. To manage the peak surface water runoff generated from the proposed development hardstanding, the flows will need to be restricted and attenuated to agreed rates with the SuDS Approving Body (SAB). Attenuation features such as attenuation cells will be needed to provide storage for the surface water runoff. To meet the interception and water quality requirements, appropriately sized SuDS features are required with sufficient retention time to allow the flow to be intercepted. To meet these requirements, different SuDS components are proposed within the development, these include rain gardens, bioretention systems, permeable paving, green roof and swale. These will allow treatment of the rainfall to occur at source where possible, removing suspended solids and hydrocarbons from the surface water prior to discharging to the attenuation cell and swale. These new water features will also act as a "green corridor," connecting the site to adjacent retained habitats within the golf course.
- An Invasive Species Management Plan must be written and delivered by a professional contractor licensed to remove and manage Invasive non-native species (INNS) on site including Japanese knotweed to minimise the risk of spreading INNS throughout the site or offsite. The management plan will be effective during the construction and operational phases of the scheme. Removal of INNS will provide a positive impact and a net benefit to biodiversity.
- Where tree loss is unavoidable, the loss will be minimised, for example the design of entrances from the B4304 kept to a minimum requirement and located where there are less mature trees.
- The design of the hotel will incorporate best-practice guidance towards treatments of glass to minimise the likelihood of mortality to birds through collisions with windows, such as the implementation of visual markers and installation of opaque, translucent or UV glass where reasonably practicable.
- Where it is not possible to avoid impacts from construction noise completely, all efforts will be made to minimise noise using best practice methods such as siting machinery away from sensitive receptors, using

[4] Bat Conservation Trust (2023) Bats and Artificial Lighting at Night. Guidance Note 08/23 Website: https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released [Accessed October 2024]

hoods to cover generators or acoustic buffers to reduce disturbance to wildlife such as breeding and wintering birds. Such methods will be detailed in a CEMP.

- Otter have been recorded within the adjacent golf course and within a ditch to the south of the site. It is possible that otter commute through the scrub on the site. Therefore maintenance of protected areas of scrub will be implemented to ensure safe passage of otters minimise risk of mortality and injury.
- Vegetation clearance of scrub and trees will be avoided during the core breeding season taken to be March to August inclusive where possible to minimise risk to nesting birds. Should any active nests be found, a suitable buffer will be established as advised by the ECoW and any clearance within the buffer around the nest will have to be completed once the chicks have fledged and the nest is no longer active.

2.2.3 Mitigate/Restore

Mitigation is used to refer to measures to avoid, reduce or remedy a specific negative impact in situ for the same receptor that is impacted.

- A small area of OMH is recorded within the proposed hotel development area which also supports notable plant species of liverwort and bee orchids. It is proposed that this habitat is translocated with soil taken to retain the plants and seed bank for use on landscape bund creation and the green roofs. Monitoring will be detailed within a Landscape and Ecological Management Plan (LEMP) to ensure the success of the translocation and identify when remedial action may be required.
- Landscape bunds will include a south facing aspect to provide habitat for reptiles and invertebrates also.
- The site supports common species of reptiles. Pending further population surveys it is aimed that reptiles will be translocated to a protected receptor site area within the wider site, to maintain the population at the site. Enhancement works such as provision of hibernacula, will be carried out to ensure that the carrying capacity is sufficient given the loss of approximately 0.9ha. reptiles. Sensitive methods of vegetation clearance will be used in conjunction with the translocation exercise.
- Landscape planting will include trees around the edges of the hotel to screen light spill from the hotel to adjacent habitat.

2.2.4 Compensation

Compensatory measures are required where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensation. Compensatory measures are often not in situ. This applies to loss of habitat within the development area which cannot be reduced or restored in its original location.

- The loss of OMH habitat can be partially mitigated by translocation of the habitat to form landscape bunds. However, the creation of green roofs to create OMH habitat will also provide compensation for loss of this priority habitat. The area of green roofs is 532m^2 which exceeds the amount of OMH habitat lost.
- Where it is not possible to retain trees, they will be replaced at a minimum ratio of 3:1 of a similar type and compensatory size (at maturity) planted for each one lost. Replacement planting will be carried out as soon as possible within the programme to reduce the time lag between habitat lost and new habitat establishment. Tree planting will be located to increase habitat connectivity between retained areas of wooded habitat along the B4304 to further benefit wildlife, especially bats commuting within the site.
- The inclusion of soft landscaping of all areas of the site (approximately 0.6ha) that are not associated with the building or access roads will compensate for lost grassland and tree habitat and include species-rich grasslands and native fruiting shrubs species to provide a food source for invertebrates, birds and mammals, and native tree planting to maintain and enhance the tree, woodland and scrub diversity within the local area. These recommendations will be worked into the landscape design and Landscape of Ecology Management Plan (LEMP) for the final detailed design
- Landscape planting around the hotel footprint will not fully compensate for the amount of grassland to be lost. Therefore, further enhancement of retained grassland to a better quality more species-rich grassland

will be implemented as detailed in a LEMP to increase the Net Benefit for Biodiversity, especially for birds, invertebrates (especially Section 7 dingy skipper and brown-banded carder bee) and reptiles and over time increase the MG5 grassland priority habitat within the wider site.

- Three trees with potential roosting features (PRFs) for bats will be lost as a result of the planned development. Bat boxes will be installed at a ratio of 1:1 on retained trees within the wider site as compensation for any bat roosting opportunities that are lost. Any bat boxes installed over and above the number of PRFs lost will be considered an enhancement to provide net benefit for biodiversity.

3. Surrounding Green Infrastructure

The proposed development site is located approximately 2.4 km to the south-east of Llanelli town centre on the Machynys peninsula that is situated on the banks of the River Loughor and Burry inlet. It is low lying land comprising largely grassland, scrub, trees and woodland. The application site is bounded to the north by the B4304 Coastal Link Road, to the east by greenfield land, also owned by Carmarthenshire County Council and the Nicklaus Avenue access road to the Machynys Peninsular Golf & Country Club further east, to the south by residential properties within Pentre Nicklaus Village, and to the west by Pentre Nicklaus Avenue. The northern boundary has a number of landscaped bunds, which form a visual screen between the site and the B4304 road.

The development area covers part of the site occupied by the former Machynys brickworks in the early part of the 20th Century. Parts of the brickworks were redeveloped as the Machynys Peninsula Golf course as part of the Llanelli Waterside regeneration plan. The golf course comprises many waterbodies and is hydrologically connected to the Llanelli Wetland Centre. These areas create a green corridor of importance for wintering birds, water vole and otter along the northern shore of the River Loughor Estuary.

4. Net Benefit for Biodiversity

All developments must provide an overall Net Benefit for Biodiversity (NBB) in the form of enhancements to meet the requirements of PPW12 and the Environment (Wales) Act 2016. This should consider features already on site and in the surrounding area. Enhancement is used to refer to measures that seek to provide NBB over and above requirements for avoidance, mitigation or compensation.

Ecological surveys undertaken at the site inform recommendations for enhancements over and above mitigation required in order to achieve a NBB. Details on the full assessment and included in the EcIA and mitigation and enhancement proposals are illustrated on the Parameter Plan in Appendix A1. Enhancements recommended are:

- Planting of more native or naturalised trees over and above the 3:1 ratio of replacements stipulated in PPW 12 to increase biodiversity.
- Creation of additional natural ponds, swales or series of cascading pools that could be incorporated with surface drainage design to provide additional habitat for birds, amphibians and invertebrate that aren't being directly impacted due to a loss of such habitat. Such pools will also benefit grass snake and create stepping stones of terrestrial and aquatic habitat to link with habitat at the golf course.
- Installation of bird and bat boxes over and above what is required to mitigation the loss of bird nesting or bat roosting habitat. Bat roosting and bird nesting features may be added into the building design as well as located on retained trees.
- The retained ditches to the south of the wider site could be enhanced for otter and water vole, for example by re-profiling if required, clearing the litter, reducing the scrub and invasive fringed waterlily, as well as planting up with aquatic and marginal species to support foraging water vole.

- The mixed broadleaf and coniferous plantation woodland present at the east of the site could be enhanced by carrying out thinning to vary light conditions, and potentially underplant with scrub species such as hazel and hawthorn. The woodland should be managed in the long term with a management plan to ensure the woodland maintains a good condition. This is an area used by local residents so tree thinning could be undertaken to create paths and glades to improve the amenity use of the area.
- Removal of invasive plants from across the wider site (not just development areas) and invasive aquatic plants from ponds within the golf course would be of benefit to biodiversity and can be included in a site wide management plan.

As outlined above and in the Ecological Impact Assessment (EcIA) submitted in support of this application, the area of the application site is 5.56 hectares (ha) and the hotel development area within the site is 1.53ha. The proposed development would result in the loss of approximately 0.9165ha of terrestrial semi-natural habitats on site including woodland and trees, dense and scattered scrub, and neutral grassland mosaic habitat (including a small amount of OMH priority habitat). The hotel footprint and associated hardstanding constitute 0.7744ha of this total area and can be considered a permanent loss of habitat. To mitigate this loss across the site, 0.61ha of landscaping is proposed within the hotel development boundary, and a further 4.3ha of land, comprising grassland, scrub and woodland, is available for proposed mitigation and enhancement measures proposed across the wider site.

To provide this NBB, the proposals include a mix of broadleaved woodland, standard trees, native scrub mix, enhancement of priority MG5 grassland and enhancement of poorer quality grassland to species-rich neutral grassland. In addition, the proposals include a biodiverse wildflower green roof to compensate for the loss of OMH habitat SuDS areas. These habitats will be designed to include a diverse mix of species to improve resilience of the site to climate change, with exact areas and planting schedules developed at reserved matters stage. Table 12 in the EcIA applies the 'DECCA' framework[5] for each habitat type to demonstrate how the proposed development will achieve NBB and ecosystem resilience, considering aspects of diversity, extent, condition and connectivity. The scheme demonstrates an increase in species diversity and condition for all habitat types, grassland, woodland, scrub and watercourses/bodies and increase in connectivity for woodland, scrub and watercourses though the landscape design. The extents of these habitats will also increase with additional planting to compensate for habitat loss, with the exception of scrub for which no change is proposed due to the implementation of scrub management to maintain open grassland areas.

All habitat interventions will require long-term habitat management to ensure retained, enhanced and newly created habitats are managed appropriately to provide continued ecological function, and delivery of NBB for the long-term. These recommendations will be worked into the landscape design and LEMP for the final detailed design in order to secure the commitment.

5. Summary

The hotel development proposals bring an area of redundant land into active use that meets the primary objective of PPW12 to provide the intended multi-functional benefits. The key elements of the design listed above is a significant improvement in creating a sense of place, provision of public amenity and net benefit to biodiversity. It is therefore considered that the ecological impact of development, which would facilitate the delivery of the mixed-use allocation (along with residential development that is submitted as a separate application) and support the local tourism economy, has been carefully assessed, with adverse impacts avoided, mitigated or compensated for, and biodiversity enhancements for the site proposed that are in line with the aspirations set out in PPW12, Future Wales, the adopted LDP and the draft Revised LDP.

[5] CIEEM (2022) Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System. https://cieem.net/wp-content/uploads/2022/08/Net-Benefits-briefing.pdf. [Accessed October 2024].

Appendix A

A.1 Parameter Plan