



**Barry Waterfront
Campus**

Ecological Appraisal

Prepared by:
**The Environmental Dimension
Partnership Ltd**

On behalf of:
Cardiff and Vale College

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PLANS

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(edp8159_d003 22 November 2023 MCa/KJa)
- Plan EDP 2: Statutory Designations
(edp8159_d001 23 August 2023 MCa/KJa)
- Plan EDP 3: Non-statutory Designations
(edp8159_d002 23 August 2023 GYo/KJa)

Executive Summary

- S1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Cardiff and Vale College (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at Barry Waterfront Campus (hereafter referred to as 'the Site'). The Site is to be the subject of a detailed planning application for a proposed new educational campus for Cardiff and Vale including landscaping, related infrastructure and engineering works.
- S2 The baseline ecological investigations, which informed this Ecological Appraisal, include a desk-study and Extended Phase 1 Habitat survey. The Site predominantly comprises bare ground and hardstanding which are of negligible intrinsic ecological importance. Unmanaged, poor semi-improved grassland is dominant across the eastern half of the Site with dense scrub present along the eastern margins. Other habitats present include ephemeral/short perennial vegetation and two small areas of outgrown amenity planting comprising stands of young/semi-mature trees. Semi-natural habitats present on-site are largely isolated from the wider landscape by existing development, although a railway line adjacent to the northern boundary of the Site provides some limited connectivity to off-site semi-natural habitat.
- S3 No part of the Site is covered by any statutory designations. Barry Island Site of Special Scientific Interest (SSSI), Fferm Walters SSSI, Cliff Wood - Golden Stairs SSSI/Local Nature Reserves (LNR) and Cwm Talwg Woodlands LNR are located within 2km of the Site. Additionally, there are seven non-statutory designations and four Natural Resources Wales (NRW) Priority Areas within 2km of the Site. With respect to potential impacts upon these designations following proposed development of the Site, no direct or indirect effects are anticipated due to their spatial distance from the Site and lack of ecological or hydrological connectivity.
- S4 Development proposals will result in the loss of all semi-natural habitat present within the Site. Given the extent and distribution of habitats present combined with their low distinctiveness and/or botanical diversity, however, such losses are not considered significant.
- S5 It is considered that potential impacts upon habitats and protected species occurring/potentially occurring within the Site will be adequately mitigated and compensated for through implementation of the ecological mitigation and enhancement strategy presented within **Section 5** of this report. Proposals include the provision of open green spaces within new development for recreation and amenity whilst the proposed planting of hedgerows and fruit bearing trees/shrubs, combined with planting in association with proposed rain gardens will provide/enhance opportunities for wildlife post-development and provide qualitative benefits to biodiversity.
- S6 On this basis, and particularly when compared the baseline condition of the Site, EDP considers that the scheme is capable of delivering long-term ecological and wider ecosystem service benefits that meet relevant national and local planning policy requirements for the conservation of the natural environment.

Section 1 Introduction

- 1.1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Cardiff and Vale College (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at Barry Waterfront Campus (hereafter referred to as 'the Site').
- 1.2 This report has been prepared with reference to the following key guidance:
- Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Preliminary Ecological Appraisal*¹;
 - CIEEM *Guidelines for Ecological Impact Assessment*²; and
 - British Standard: *Biodiversity - Code of Practice for Planning and Development*³.
- 1.3 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

- 1.4 The Site is centred approximately at Ordnance Survey Grid Reference (OSGR) ST 110 674. The local planning authority (LPA) is Vale of Glamorgan Council (VoGC). The location and extents of the Site are illustrated on **Plan EDP 1** and described in the material supporting the planning application, particularly the Design and Access Statement (DAS).
- 1.5 The Site measures approximately 1.2 hectares (ha) and is located within the town of Barry. The Site has been developed previously (former industrial dockland) and therefore predominantly comprises bare ground and hardstanding. Unmanaged, poor semi-improved grassland is dominant across the eastern half of the Site, whilst dense scrub delineates the boundary fence with Hood Road/Ffordd Y Mileniwn Road. Other habitats present include ephemeral/short perennial vegetation and two small areas of outgrown amenity planting which now supports stands of young/semi-mature trees. Land uses in the surrounding landscape are predominantly commercial or residential, with Barry Goodsheds adjacent to the north, a supermarket to the south and the Barry Waterfront to the east. A school, recently constructed, is present to the south and west, although construction activities were ongoing at the time of survey with the Site used for storage of materials and to accommodate movement of machinery. The Site is relatively isolated from semi-natural habitat in the wider landscape; however,

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

² CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2*. Chartered Institute of Ecology and Environmental Management, Winchester.

³ BSI (2013) *Biodiversity - Code of Practice for Planning and Development*. BS 42020:2013. British Standards Institute.

a decommissioned railway line and track terminus delineates the northern boundary of the Site and may provide dispersal opportunities for wildlife, albeit semi-natural vegetation is very limited here.

DEVELOPMENT PROPOSALS

- 1.6 In brief, development proposals comprise the “*Proposed redevelopment of vacant brownfield site at Barry Waterfront for a new educational campus for Cardiff and Vale Campus including landscaping, related infrastructure and engineering works*”.
- 1.7 The proposals are to be the subject of a detailed planning application. The Landscape Illustrative Masterplan is provided as **Appendix EDP 1** to this report.
- 1.8 The ecological sensitivities of the Site have influenced the final layout through an iterative design process. Thus, the Landscape Illustrative Masterplan incorporates a degree of ‘inherent’ mitigation to avoid or reduce the severity of potential ecological impacts.

SCOPE OF THE ASSESSMENT

- 1.9 This Ecological Appraisal describes the current ecological interest within and around the Site, which has been identified through standard desk and field-based investigations. It then considers the potential ecological impacts and opportunities for ecological enhancement based on the final masterplan (incorporating inherent mitigation) in the context of relevant legislation and planning policy. Finally, this Appraisal identifies the necessary additional measures to avoid, mitigate or provide compensation for potential impacts, and the mechanisms for securing such measures.
- 1.10 The remainder of this report is structured as follows:
- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Site (with further details provided within Appendices and on Plans where appropriate);
 - **Section 3** summarises the baseline ecological conditions (with further details also provided within Appendices and on Plans where appropriate) and identifies and evaluates any pertinent ecological features/receptors;
 - **Section 4** describes how the development design has responded to the ecological constraints and any embedded/inherent mitigation, and then considers the potential impacts of the proposals on pertinent ecological features;
 - **Section 5** proposes mitigation and enhancement measures for the current and possible future planning stages, in the context of relevant legislation and planning policy, and mechanisms to secure their delivery; and
 - **Section 6** summarises the Mitigation and Enhancement Strategy for the Site and provides the overall conclusions of the Appraisal.

Section 2 Baseline Methodology

2.1 This section of the Ecological Appraisal summarises the methodologies employed in determining the baseline ecological conditions within and around the Site. This has been undertaken by appropriately qualified ecologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology are given and normally relate to the timing of EDP's commission and/or the availability of access to parts of the Site or wider study area.

DESK STUDY

2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, which entails the initial collation and review of contextual information, such as designated sites, together with known records of important habitats or species.

2.3 The desk study involved collating biodiversity information from the following sources:

- South East Wales Biological Records Centre (SEWBRc); and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website⁴.

2.4 The desk study was undertaken during May 2023 and involved obtaining the following information:

- International statutory designations (10km radius around Site);
- National statutory designations and non-statutory local sites (2km radius);
- Annex II bat species⁵ records (6km radius);
- All other protected, priority⁶ and notable species⁷ records (2km radius); and
- All other notable habitat records (500m radius).

2.5 These search areas are considered sufficient to cover the potential Zones of Influence⁸ of the proposed development in relation to designated sites, habitats and species.

⁴ www.magic.gov.uk.

⁵ Bat species listed in Annex II of the *EC Habitats Directive*, namely Greater horseshoe, Lesser horseshoe, Barbastelle and Bechstein's bats.

⁶ Species considered of key significance to sustain and improve biodiversity in Wales, as defined under Section 7 of Part 1 of the *Environment (Wales) Act 2016*.

⁷ Notable species are those which are not legally protected but are formally identified as being of conservation concern.

⁸ Zone of Influence - the areas and resources that may be affected by the proposed development.

- 2.6 The adopted Vale of Glamorgan Local Development Plan (LDP)⁹ and Supplementary Planning Guidance (SPG) - Trees, Woodlands, Hedgerows and Development (2018)¹⁰ and Biodiversity and Development (2018)¹¹ were also reviewed as part of the desk study, to understand local priorities with regard to protection of ecological features/biodiversity.

EXTENDED PHASE 1 HABITAT SURVEY

- 2.7 The survey technique adopted for the Extended Phase 1 Habitat survey was at a level intermediate between a standard Phase 1 Habitat survey technique¹², involving habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey involved identifying and mapping the main habitat types (including Priority Habitats) and scoping any potential protected or Priority Species populations. This level of survey is not intended to compile a complete floral and faunal inventory for the Site.
- 2.8 The Extended Phase 1 Habitat survey was undertaken by a suitably experienced surveyor on 16 May 2023, during which the weather was clear and still with a temperature of 18°C.

Limitations

- 2.9 May is within the optimum period for undertaking an Extended Phase 1 Habitat survey, such that seasonal and climatic factors are not considered a constraint to the survey area.
- 2.10 Surveys were limited to recording plant species present in both vegetative and floristic forms at the time of survey; the lack of any species record from this report does not automatically imply species' absence from the Site.

DETAILED (PHASE 2) SURVEYS

- 2.11 The following surveys were undertaken during the Extended Phase 1 Habitat survey on 16 May 2023.

Bat Roost Surveys

- 2.12 The scope of bat surveys undertaken at the Site was determined following review of relevant desk-study findings and with reference to best practice guidelines at the time of survey¹³.

⁹ Vale of Glamorgan (2011). Vale of Glamorgan Local Development Plan 2011-2026. Available at: <https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/LDP/LDP-Adoption/Adopted-LDP-Written-Statement-June-2017-final-interactive-web-version.pdf> [Accessed on 10 November 2023].

¹⁰ Vale of Glamorgan (2018). Trees, Woodland, Hedgerows and Development Supplementary Planning Guidance. Available at: <https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/SPG/Final-Trees-Woodlands-Hedgerows-and-Development-SPG-2018-v2.pdf> [Accessed on 10 November 2023].

¹¹ Vale of Glamorgan (2018). Biodiversity and Development Supplementary Planning Guidance. Available at: <https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/Biodiversity-and-Development-SPG-2018.pdf> [Accessed on 10 November 2023].

¹² Joint Nature Conservation Council (2004) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication).

¹³ Collins, J. (ed.) (2016). *Bat Surveys: for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust, London.

Preliminary Ground Level Roost Assessment

- 2.13 Owing to the presence of suitably mature trees within or adjacent to the Site, a preliminary ground level roost assessment of these trees was undertaken to record any external evidence of roosting bats or any features capable of supporting roosting bats.
- 2.14 The survey was completed during the Extended Phase 1 Habitat survey on 16 May 2023 by a suitably experienced ecologist in accordance with the best practice guidelines referred to above. The trees were searched as thoroughly as possible from ground level with all elevations covered where these could be accessed.
- 2.15 Suitable features for roosting bats recorded (where present) include the following:
- Loss/peeling/fissured bark;
 - Natural holes e.g. rot hole, cavities and wounds from fallen limbs;
 - Woodpecker holes;
 - Cracks/splits or hollow tree trunks/limbs;
 - Bat, bird or dormouse boxes; and
 - Crevices formed by thick-stemmed ivy.
- 2.16 Signs of roosting bat presence recorded (where present) include the following:
- Bat/s roosting *in situ*;
 - Bat droppings within, around or beneath a potential roost feature;
 - Staining around or beneath a feature;
 - Audible squeaking from the roost at dusk during warm weather; and
 - Large/regularly used roosts may produce a distinctive odour.
- 2.17 Based upon the evidence/features identified, each tree was assigned to one of the following categories:
- Known or confirmed roost - European Protected Species (EPS) licence likely to be required for works to tree to be completed lawfully;
 - High suitability - One or more potential roost features present that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time;
 - Moderate suitability - One or more potential roost features present that could be used by bats but are unlikely to support a roost type of high conservation status (with respect to roost type only);

- Low suitability - A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen but with only very limited roosting potential; and
- Negligible suitability - No potential to support roosting bats.

Limitations

- 2.18 As with any ground level assessments of trees, certain features may not be visible or fully visible from the ground, particularly in May when most trees are in leaf. However, full access to the Site was granted and there were no access limitations around the elevations of the trees.
- 2.19 Bats are mobile animals and will move between a series of different tree roost sites, frequently establishing and occupying different potential roost features, depending on seasonal requirements and resources available locally. Furthermore, existing potential roost features on trees can be transient and new features formed regularly. This survey, therefore, only provides a snapshot of the conditions present at the Site at the time of survey.
- 2.20 It should be noted that this type of assessment is based on features visible from ground level and is not considered to be a definitive bat roosting survey.

ECOLOGICAL SURVEYS SCOPED OUT

- 2.21 **Table EDP 2.1** summarises other survey types which, whilst occasionally required to inform a planning submission for development sites, are not deemed to be necessary/appropriate in this case.

Table EDP 2.1: Ecology Surveys Scoped Out

Survey Type	Reasons for Scoping Out
Detailed Botanical Survey	The Extended Phase 1 Habitat survey identified that habitats and flora present within the Site are those typically found to be common and widespread in Wales and the UK. Given the historical use of the Site, limited extent of vegetated habitats and it's heavily urbanised setting, a detailed botanical survey was not considered necessary.
Bat Activity Survey	The Site is predominantly hardstanding and bare ground with the surrounding landscape highly urbanised. Semi-natural habitat is limited to an isolated area of unmanaged poor semi-improved grassland within the eastern half of the Site (delineated by hardstanding and roads), two small areas of amenity tree planting and short ephemeral/perennial vegetation. None of the trees were found to contain features suitable for roosting bats. With limited semi-natural habitat present, and in consideration of the Site's location within the town of Barry, the habitats present within the Site were identified as being of negligible/limited suitability to support foraging and commuting bats. In accordance with best practice guidance, no further bat activity surveys are recommended in this instance.

Survey Type	Reasons for Scoping Out
Otter (<i>Lutra lutra</i>)/- Water Vole (<i>Arvicola amphibius</i>)	There is no suitable habitat for either species on or adjacent to the Site with both species presumed absent.
Great Crested Newt (<i>Triturus cristatus</i>)	There is no suitable aquatic habitat on-site. Although poor semi-improved grassland and scrub provides suitable, albeit limited terrestrial habitat for this species, the Site is largely isolated from suitable habitat in the wider landscape by main roads and existing development, all considered significant barriers to the dispersal of great crested newt. Combined with the absence of suitable breeding habitat within 500m of the Site, this species is presumed absent.
Invertebrates	The Site predominantly comprises bare ground/hardstanding with an unmanaged and isolated area of poor semi-improved grassland located within an urban setting. As such, the Site is considered likely to support a limited assemblage of common and widespread invertebrate species only. No further surveys for invertebrates are considered necessary in this instance.
Other Species Surveys	Further surveys in respect of breeding/wintering birds, reptiles, dormouse (<i>Muscardinus avellanarius</i>) and badger (<i>Meles meles</i>) are not considered necessary in this instance. Semi-natural habitat is limited and largely isolated from suitable habitat within the wider landscape. There is very little habitat connection between the Site and wider landscape, limiting dispersal of wildlife. Precautionary measures of clearance during the pre-construction phases of future development are instead proposed, to ensure no harm/disturbance to protected and notable species potentially present.

Section 3 Baseline Results

- 3.1 This section of the Ecological Appraisal summarises the baseline ecological conditions determined through the course of desk-based and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Site's potential Zone of Influence and which are pertinent in the context of the proposed development. Further technical details are, where appropriate, provided within Appendices and on Plans to the rear of this report.
- 3.2 Where a particular ecological feature/receptor has been confirmed to be present, or presence is inferred based on habitat suitability, its ecological importance is assessed. The level of ecological importance assigned to each ecological feature is based upon established geographical value systems and the uses the following scale: International and European (highest) > National > Regional > County > District > Local > Negligible/Site (lowest).

DESIGNATED SITES

- 3.3 Information regarding designated sites was obtained during the desk study. Statutory designations (those receiving legal and planning policy protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

- 3.4 Statutory designations represent the most significant ecological receptors. Internationally important statutory designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites (including potential SPAs, possible SACs and proposed Ramsars). These designations are protected under the *Conservation of Habitats and Species Regulations 2017* (as amended) (the *Habitats Regulations*).
- 3.5 Nationally important statutory designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). NNRs are also SSSIs, both of which are protected under the *Wildlife and Countryside Act 1981* (as amended).
- 3.6 The legal protection of SACs, SPAs, Ramsar Sites and SSSIs is also reflected in policies included within Planning Policy Wales 11 (PPW) and within Technical Advice Note 5: Nature Conservation and Planning (TAN5), which are a material consideration during the planning application process.
- 3.7 Local level statutory designations include Local Nature Reserves (LNRs) and are generally considered to be of importance at the County level or lower. LNRs are designated under the *National Parks and Access to the Countryside Act 1949*, however, protection of LNRs is given via local planning policies and/or by-laws.
- 3.8 Statutory designations are also recognised as key natural assets within the adopted Vale of Glamorgan Local Development Plan (LDP). Specifically, Policy SP10 (Built and Natural Environment) requires proposals to preserve and where appropriate enhance the rich and

diverse built and natural environment and heritage of the Vale of Glamorgan including sites designated for their local, national and European nature conservation importance.

3.9 Of further consideration Policy MG19 (Sites and Species of European Importance) states, in part:

“Development proposals likely to have a significant effect on a European site, when considered alone or in combination with other projects or plans will only be permitted where:

- *The proposal is directly connected with or necessary for the protection, enhancement and positive management of the site for conservation purpose; or*
- *The proposal will not adversely affect the integrity of the site;*
- *There is no alternative solution;*
- *There are reasons of overriding public interest; and*
- *Appropriate compensatory measures are secured.”*

3.10 Meanwhile, Policy MG20 (Nationally Protected Sites and Species) states, in part:

“Development likely to have an adverse effect either directly or indirectly on the conservation value of a site of special scientific interest will only be permitted where it is demonstrated that:

- *There is no suitable alternative to the proposed development; and*
- *It can be demonstrated that the benefits from the development clearly outweigh the special interest of the site; and*
- *Appropriate compensatory measures are secured; or*
- *The proposal contributes to the protection, enhancement or positive management of the site.”*

3.11 No part of the Site is covered by any statutory designations. However, there is one internationally important designation within 10km of the Site, three nationally important designations within 2km of the Site, and one county important designations within 2km of the Site. These sites are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 2**.

Table EDP 3.1: Statutory Designations Within the Site's potential Zone of Influence

Designation	Approximate Distance from Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 10km of the Site)		
Severn Estuary SAC, SPA and Ramsar	7.7km east	<p>SAC: Designated for presence of Annex I habitats estuaries, mudflats and sandflats not covered by seawater at low tide and Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>). Designated for presence of Annex II species sea lamprey (<i>Petromyzon marinus</i>), river lamprey (<i>Lampetra fluviatilis</i>) and twaite shad (<i>Alosa fallax</i>).</p> <p>SPA: The Severn Estuary is particularly important for migratory birds with its tidal flats and associated wetlands regularly supporting over 20,000 wintering waterfowl. Internationally important populations of five species of waterfowl are regularly supported by the estuary. These include European white-fronted goose (<i>Anser albifrons albifrons</i>), shelduck (<i>Tadorna tadorna</i>), gadwall (<i>Anas strepera</i>), dunlin (<i>Calidris alpina</i>) and redshank (<i>Tringa totanus</i>).</p> <p>Ramsar: The estuary has the second highest tidal range in the world resulting in an extensive intertidal zone. The invertebrate community provides an important food source for passage and wintering waders. The site is of particular importance for staging nationally important numbers of several species of waterbirds and supports internationally important numbers of various species of wintering waterbirds.</p>
Nationally Important Statutory Designated Sites (within 2km of the Site)		
Barry Island SSSI	880m south	The marginal facies of the Mercia Mudstone Group is seen in a unique unconformable relationship with the Carboniferous Limestone at Barry Island. The locality is unique in showing such a spectacular exposure of marginal Triassic facies. As this site is designated for geological reasons, it is not of relevance to this ecological appraisal and is not considered further in this report.
Cliff Wood – Golden Stairs SSSI/LNR	1.6km west	The best example of a mixed woodland in South Glamorgan, which has a canopy of pedunculate oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>), maple (<i>Acer</i> spp.) and yew (<i>Taxus baccata</i>). The interesting, ungrazed ground flora and wooded cliff areas include purple gromwell (<i>Lithospermum purpureocaeruleum</i>), which is restricted to a very small number of sites in the county.

Designation	Approximate Distance from Site	Interest Feature(s)
Fferm Walters SSSI	1.7km north-west	Large area of species-rich neutral grassland, most of which has a particularly calcicolous nature and is one of the rarest types of grassland in Wales.
Statutory Designated Sites of County Importance (within 2km of the Site)		
Cwm Talwg Woodlands LNR	1km north-west	2.85ha of mature deciduous woods in three sections, separated by a housing development.

Non-statutory Designations

3.12 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although such designations are typically considered to be of importance at a County level. In the Vale of Glamorgan, such designations are termed Sites of Importance for Nature Conservation (SINCs). Additional sites such as non-designated nature reserves (e.g., Wildlife Trust nature reserves), NRW Priority Areas and Ancient Semi-natural Woodland (ASNW) are considered here when not covered by other designations. The importance of SINCs is recognised in PPW and in the VoGC LDP, specifically Policy MG21 (Sites of Importance for Nature Conservation, Regionally Important Geological Geomorphological Sites and Priority Habitats and Species) which states:

“Development proposals likely to have an adverse impact on sites of importance for nature conservation or priority habitats and species will only be permitted where it can be demonstrated that:

- *The need for the development clearly outweighs the nature conservation value of the site;*
- *Adverse impacts on nature conservation and geological features can be avoided;*
- *Appropriate and proportionate mitigation and compensation measures can be provided; and*
- *The development conserves and where possible enhances biodiversity interests.”*

3.13 No part of the Site is covered by any non-statutory designations. There are seven SINCs located within 2km of the Site, as summarised in **Table EDP 3.2** and shown on **Plan EDP 3**.

Table EDP 3.2: Non-statutory Designations Within 2km of the Site

Designation	Approximate Distance from Site	Interest Feature(s)
Gladstone Road Pond SINC	586m north-east	Pond – large smooth newt (<i>Lissotriton vulgaris</i>) breeding population.
North Cwm Barri SINC	929m west	Lowland mixed deciduous woodland.
Friars Point SINC	956m south	Lowland meadow/calcareous grassland mosaic.

Designation	Approximate Distance from Site	Interest Feature(s)
Nells Point East SINC	1.1km south-east	Lowland meadow.
North East of Knock Man Down Wood SINC	1.4km west	Lowland mixed deciduous woodland.
Walters Farm SINC	1.7km north-west	Lowland meadows.
Fields at Merthyr Dyfan SINC	1.7km north	Lowland meadows.

3.14 Of further pertinence, several parcels of Restored Ancient Woodland (RAW) and ASNW were identified within 2km of the Site, the closest circa 1.2km south-west.

HABITATS

3.15 There are several mechanisms by which habitats that lie outside of statutory and non-statutory designations are protected, or by which their importance is recognised at a national level. This includes the following:

- 'Important' hedgerows are protected from removal (out with the planning process) by the *Hedgerows Regulations 1997*;
- Certain habitats comprise Priority Habitats, which public authorities in Wales must seek to maintain and enhance (to promote ecosystem resilience) as part of policy or decision making under Section 6 of the *Environment (Wales) Act 2016*;
- PPW includes a presumption against development which results in significant harm to biodiversity and ecosystem functioning, or results in the loss of irreplaceable habitat¹⁴. PPW also sets out the how planning authorities should fulfil their 'Biodiversity and Resilience of Ecosystems Duty' as required the *Environment (Wales) Act*; and
- The importance of protecting habitats, and networks of habitats, is reflected in the Vale of Glamorgan local Development Plan, specifically Policy MG21.

3.16 The distribution of different habitat types within the Site is illustrated on **Plan EDP 1**. The habitats are further described below alongside illustrative photographs and species lists.

Poor Semi-improved Grassland

3.17 Approximately 0.5ha of the Site is represented by this habitat type. The sward is dominated by common grass species characteristic of poor semi-improved grassland. Red fescue

¹⁴ Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed. Habitats noted as irreplaceable within PPW are ancient woodland, semi-natural woodland, and ancient, veteran and heritage trees.

(*Festuca rubra*) and barren brome (*Anisantha sterilis*) are co-dominant whilst cock's-foot (*Dactylis glomerata*) is abundant and sweet vernal grass (*Anthoxanthum odoratum*) and field wood rush (*Luzula campestris*) occur frequently. Herbaceous species occur occasionally and include common vetch (*Vicia sativa*), yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*), meadow buttercup (*Ranunculus acris*), charlock (*Sinapis arvensis*), hairy tare (*Ervilla hirsuta*), creeping cinquefoil (*Potentilla reptans*) and bird's-foot-trefoil (*Lotus corniculatus*). At the time of survey, the grassland appeared to be less intensively managed than typical for amenity use and subject to infrequent mowing, with a sward height of 0.8m.



Image EDP 3.1: Grassland area looking east.



Image EDP 3.2: Grassland area looking north towards railway sidings/Barry Goodsheds.

- 3.18 Given the comparatively species-poor composition of the grassland sward across this area, and the common nature of this habitat within the local area, poor semi-improved grassland is considered to be of Site level importance.

Scrub

- 3.19 This habitat is predominantly associated with the eastern boundary of the Site between the edge of the grassland area and the boundary fence to Hood Road/Ffordd Y Mileniwn Road. It is dominated by bramble (*Rubus spp.*) and buddleia (*Buddleia davidii*) with occasional common teasel (*Dipsacus fullonum subsp. fullonum*).



Image EDP 3.3: Scrub near the entrance to the Site.



Image EDP 3.4: Scrub along Site fence line.

- 3.20 There is limited species diversity, and this habitat type is found commonly in the wider landscape; therefore, the scrub is considered to be of Negligible importance.

Ephemeral/Short Perennial and Bare Ground

- 3.21 This habitat type is frequently disturbed and damaged by construction activities such as plant movement through the Site. Where vegetation occurs, it is typically dominated by buddleia, nettle (*Urtica dioica*) cock's-foot and bramble, with red fescue, red valerian (*Centranthus ruber*), common vetch, wall barley (*Hordeum murinum*) and oxeye daisy (*Leucanthemum vulgare*) appearing rarely.



Image EDP 3.5: Example of bare ground area.



Image EDP 3.6: Ephemeral vegetation close to the Site entrance.

- 3.22 Due to limited species diversity, with only small and disturbed areas of this habitat present, ephemeral/short perennial vegetation and bare ground habitat is considered to be of Negligible importance.

Amenity Planting

- 3.23 Two small vestigial areas of amenity tree planting occur at the western end of the Site. This habitat is outgrown and unmanaged, with a scrub understory developing in the southernmost area. Tree species include young to semi-mature alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), goat willow (*Salix caprea*) and other ornamental willow species (*Salix spp.*).



Image EDP 3.7: Amenity planted area at the western end of the Site isolated by bare ground.

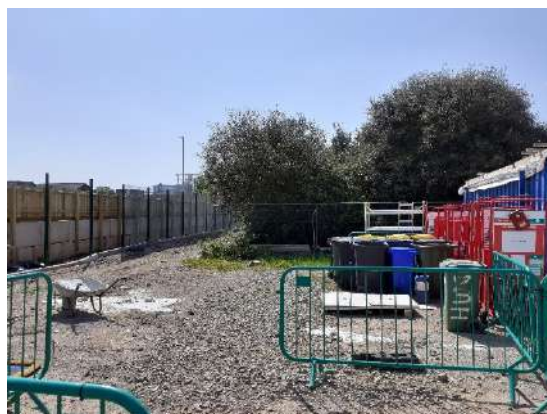


Image EDP 3.8: Amenity planted area with scrub understorey.

- 3.24 Although this habitat is isolated by areas of bare ground and hardstanding, it represents a resource of mature vegetated habitat of value to protected/notable species such as nesting birds; therefore, this habitat type is considered to be of Site level importance.

Hardstanding

- 3.25 The Site is accessed by an existing tarmacked road which extends the width of the Site in a 'T' shape. This habitat has very limited ecological value and is considered to be of Negligible importance.



Image EDP 3.9: View of the Site looking east with railway siding/Barry Goodsheds on the right.



Image EDP 3.10: Tarmacked entranceway.

Table EDP 3.3: Summary of Habitats Within the Site

Habitat Type	Distribution	Intrinsic Ecological Importance*
Poor Semi-improved Grassland	This habitat covers approximately 0.5ha of the Site and is unmanaged.	Site
Scrub	Present along the eastern boundary fencing.	Negligible
Ephemeral/Short Perennial and Bare Ground	Frequently disturbed habitat associated with the western part of the Site.	Negligible

Habitat Type	Distribution	Intrinsic Ecological Importance*
Amenity Planting	Two small areas of outgrown and unmanaged vestigial amenity tree planting.	Site
Hardstanding	Main access road into the Site.	Negligible

*Importance irrespective of any protected, priority or other notable species which may be present

3.26 As noted within **Table EDP 3.3**, the Site is made up of habitats which are of less than Local, or negligible, intrinsic importance. However, a number of the habitats, including those which are of limited intrinsic importance, also require consideration in relation to their importance in maintaining populations of protected, priority or other notable species. This is discussed further below.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

3.27 Certain species receive legal protection in the UK and are commonly known as ‘protected species.’ In reality, the level of protection for different species varies considerably, from protection solely against ‘killing and injury’ to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.

3.28 In addition to protected species there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status. This includes Priority Species, which public authorities in Wales must seek to maintain and enhance as part of policy or decision making under Section 7 of the *Environment (Wales) Act 2016*. PPW recognises species as an important component of biodiversity, as does the VoGC LDP. Specifically, Policy MG19 (Site and Species of European Importance) states:

“Development proposals likely to have an adverse effect on a European protected species will only be permitted where:

- *There are reasons of overriding public interest;*
- *There is no satisfactory alternative; and*
- *The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”*

3.29 Of further consideration is Policy MG20 (Nationally Protected Sites and Species):

“Development proposals likely to affect protected species will only be permitted where it is demonstrated that:

- *The population range and distribution of the species will not be adversely impacted;*
- *There is no suitable alternative to the proposed development;*

- *The benefits of the development clearly outweigh the adverse impacts on the protected species; and*
- *Appropriate avoidance, mitigation and compensation measures are provided.”*

3.30 Consideration of Priority Species is also given within Policy MG21 (Sites of Importance for Nature Conservation, Regionally Important Geological Geomorphological Sites and Priority Habitats and Species).

3.31 The likelihood of presence, or confirmed presence, of protected, priority or other notable¹⁵ wildlife species within the Site is summarised below with reference to desk study records, habitat suitability and detailed surveys where relevant. Further details are made available within the Appendices and Plans where referenced.

Breeding Birds

3.32 All wild birds, their nests and eggs are protected under the *Wildlife and Countryside Act 1981* (as amended) (WCA). This makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take, damage or destroy the egg of any wild bird; or
- To have in one's possession or control any wild bird (dead or alive) or egg, or any part of a wild bird or egg.

3.33 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the WCA, prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. A number of species are also included as Priority Species.

3.34 A large number of records of bird species were retrieved during the desk study, including 22 records of WCA Schedule 1 species (within 2km), 44 records of Priority Species, and a further 68 records of species included on the latest Red and Amber lists of Birds of Conservation Concern for Wales¹⁶. The vast majority of records received relate to species that would not normally breed in habitats found within the Site. Records of the species typically associated with those habitats present on-site include dunnock (*Prunella modularis*), house sparrow (*Passer domesticus*) and robin (*Erithacus rubecula*).

3.35 The majority of the Site is not considered likely to support a notable breeding bird assemblage given its relatively small size and dominance of bare ground and hardstanding with little vegetative cover of value to a bird assemblage for breeding and foraging. Of pertinence, little bird activity was observed during the Phase 1 Habitat survey, likely due to the frequent disturbance of suitable habitats associated with construction traffic passing through the Site.

¹⁵ Notable species are those which are not legally protected but are formally identified as being of conservation concern.

¹⁶ Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 2:1.

However, scrub habitat and semi-mature trees present within the Site provide some suitable foraging and nesting resource for a limited assemblage of common and widespread species.

- 3.36 Overall, the Site itself is considered to be of limited value to a breeding bird population. The breeding bird assemblage on-site is therefore judged to be of Site level importance.

Bats

- 3.37 All species of British bat are listed as European Protected Species (EPS) on Schedule 2 of the *Conservation of Habitats and Species Regulations 2017* (as amended) (referred to as the 'Habitats Regulations'). This affords strict protection to bats and their roosts, and makes it an offence to:

- Deliberately capture, injure or kill a wild animal of an EPS;
- Deliberately disturb wild animals of an EPS wherever they are occurring, in particular, any disturbance which is likely to impair their ability to survive, to breed or reproduce, to significantly affect the local distribution or abundance of the species to which they belong, or in the case of hibernating or migratory species, to hibernate or migrate; or
- Damage or destroy a breeding site or resting place of a wild animal of an EPS.

- 3.38 Additional protection for bats is also afforded under the WCA, making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place. In addition, soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), barbastelle bat (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), and lesser horseshoe bat (*Rhinolophus hipposideros*) are also listed as Priority Species.

- 3.39 The desk study returned 33 records for bats within the 2km search radius around the Site. These records relate to at least seven different species, with the closest record of confirmed bat roosting being for soprano pipistrelle located approximately 465m from the Site.

- 3.40 Seventeen records of Annex II species were returned within 6km of the Site. All records returned were for lesser horseshoe bat.

Bat Foraging/Commuting

- 3.41 The Site itself predominantly comprises bare ground, hardstanding and unmanaged poor semi-improved grassland. The Site is subject to continual disturbance from human activity (used as the site compound for adjacent construction works at the time of survey) with the grassland, scrub, and trees isolated from other semi-natural habitat in the wider landscape by existing development. It is considered unlikely these habitats are regularly used by bats given their isolated, sub-optimal nature, with the Site located in a heavily urbanised area of Barry. The small amenity planted areas do contain some semi-mature trees, albeit none of which were found to contain features suitable for roosting bats. A railway line is adjacent to the northern boundary of the Site, however, this has been redeveloped as part of the Barry Goodsheds commercial centre and is devoid of vegetation which would otherwise provide suitable cover for a commuting/foraging bat assemblage.

- 3.42 Following the Extended Phase 1 Habitat survey, in combination with review of the desk-study information, the Site is identified as being of limited suitability for foraging and commuting bats which are considered of no more than Site level importance.

Bat Roosting

Trees

- 3.43 During the preliminary ground level assessment of trees undertaken during the Extended Phase 1 Habitat survey in May 2023, no trees were identified with suitable features for roosting bats. The majority of the tree stock was young to early mature standards with no observable features from the ground, and none of an age or condition likely to support unseen features. No further surveys for roosting bats in trees are therefore necessary.

Buildings/Built Structures

- 3.44 Two temporary 'welfare units' are present on-site, used as the Site compound/office for adjacent construction works. These portacabins are constructed from steel with no suitable roosting opportunities for bats. There are no other buildings or structures on-site.
- 3.45 A roosting bat assemblage is thus considered to be of negligible importance in the context of the Site.



Image EDP 3.11: Site compound for adjacent construction works.

Dormouse

- 3.46 Hazel dormouse is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a Priority Species.
- 3.47 One record for dormouse was returned within 2km of the Site's boundaries during the desk study. This record is for a nest at a distance of 1.86km from the Site in 2013.
- 3.48 The semi-natural habitat on-site is considered unsuitable for dormouse. The existing surrounding urban infrastructure creates a significant barrier to the dispersal of dormouse between the Site and potential suitable habitat within the wider landscape. In consideration of habitat availability coupled with lack of connectivity to the wider landscape, dormouse is presumed absent from the Site and will not be considered further within this assessment.

Otter

- 3.49 Otter is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a Priority Species.
- 3.50 Seven records of otter were returned within 2km of the Site, the closest record being 1.44km from the Site, with the majority of the records linked to the Nant Talwg watercourse associated with Porthkerry country park to the south-west.
- 3.51 The semi-natural habitat on-site is considered unsuitable for otter. Based on the desk-study information above and lack of suitable or available habitat for this species, otter is presumed absent from the Site and will not be considered further within this assessment.

Water Vole

- 3.52 Water vole and their burrows receive protection under Schedule 5 of the WCA. This makes it an offence to:
- Intentionally kill, injure or take (capture) a water vole;
 - Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection; and
 - Intentionally or recklessly disturb water voles while they are in a place of shelter or protection.
- 3.53 Water vole is also listed as a Priority Species.
- 3.54 No records of water vole were returned within 2km of the Site's boundaries. There are no watercourses present on-site and the terrestrial habitats are of negligible suitability for water vole. Based on the desk-study information above and lack of suitable or available habitat for this species, water vole is presumed absent from the Site and will not be considered further within this assessment.

Badger

- 3.55 Badgers and their setts are protected under the *Protection of Badgers Act 1992*, which makes it an offence (*inter-alia*) to:
- Wilfully kill, injure, take, or cruelly ill-treat a badger; and
 - Damage or interfere with a sett, by doing one of the following things:
 - Damage a badger sett or any part of it;
 - Destroy a badger sett;
 - Obstruct access to, or any entrance of, a badger sett;
 - Cause a dog to enter a badger sett; or
 - Disturb a badger when it is occupying a sett.
- 3.56 The 1992 Act defines a badger sett as “*any structure or place which displays signs indicating current use by a badger*”.
- 3.57 The protection afforded to badgers is primarily due to animal welfare issues and history of persecution rather than concerns over their unfavourable nature conservation status.
- 3.58 Four records of badger were returned within 2km of the Site. The habitat within the Site offers negligible opportunities for badger foraging and sett building. No signs of badger were identified during the Extended Phase 1 Habitat survey and as previously discussed, the Site is regularly disturbed with little cover and limited foraging opportunities.
- 3.59 Based on the desk-study information above and limited available habitat for this species, badger is presumed absent from the Site and will not be considered further within this assessment.

Other Mammal Species

- 3.60 Records of the following Priority mammal species were returned within 2km of the Site:
- Polecat (*Mustela putorius*) – One record returned for Porthkerry country park 1.2km south-west of the Site; and
 - European hedgehog (*Erinaceus europaeus*)¹⁷ – 35 records, the closest of which is 485m from the Site, most of the records are associated with the residential areas of Barry.
- 3.61 The on-site habitats are of negligible suitability for polecat. The existing surrounding urban infrastructure creates a significant barrier to the dispersal of such species between the Site and potential suitable habitat within the wider landscape. As such, polecat are presumed absent from the Site and will not be considered further within this assessment.

¹⁷ Hedgehogs are also protected from capture or killing by specific methods under Schedule 6 of the WCA.

3.62 The Site encompasses some suitable foraging and breeding habitats for hedgehog limited to the grassland and scrub area. However, this area is isolated from other semi-natural habitat by busy main roads and therefore, there is a reasonable likelihood that this species is absent from the Site. Nonetheless, given that hedgehog can regularly occur within urban habitats combined with the proximity of desk study records, its presence cannot be fully ruled out. Hedgehog is thus considered to be of Site level importance.

Great Crested Newt

3.63 Great crested newt is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the WCA as summarised above in respect of bats. This species is also listed as a Priority Species.

3.64 No records of great crested newt were returned within 2km of the Site; additionally, no waterbodies within 500m of the Site were located during the desk study. Barry Docks is 60m from the Site; however, this waterbody is considered to be unsuitable for great crested newt due to artificial bank structure, lack of aquatic vegetation and saltwater conditions. As such, this species is presumed absent from the Site and will not be considered further within this assessment.

Other Amphibian Species

3.65 Other legally protected amphibians are rare and have a very restricted distribution¹⁸, however common toad (*Bufo bufo*) is a widespread species which is listed as a Priority Species.

3.66 Records of the following amphibian species were returned within 2km of the Site:

- Common toad - three records returned from Porthkerry country park 1.98km west;
- Common frog (*Rana temporaria*) - five records returned, the closest of which is from Cwm Talwg Woodlands LNR 1.19km north-west;
- Palmate newt (*Lissotriton helveticus*) - four records returned, the closest of which is from 787m north;
- Smooth newt (*Lissotriton vulgaris*) - three records returned, the closest of which is from a garden pond 761m west; and
- Unidentified newt species (*Lissotriton sp.*) - one record returned from Gladstone Road Pond SINC 700m north-east.

3.67 No incidental sightings of amphibians were recorded during the Extended Phase 1 Habitat survey. The Site encompasses some suitable terrestrial habitat for common amphibian species albeit limited to the grassland and scrub boundaries of the Site. The Site itself is isolated with

¹⁸ Natterjack toad (*Epidaeia calamita*) and Northern pool frog (*Pelophylax lessonae*) are EPS, protected under WCA and priority species.

limited dispersal opportunities and no suitable aquatic habitat within 500m. Common amphibians are considered to be of Site level importance only.

Reptiles

- 3.68 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm, grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the WCA, making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as Priority Species.
- 3.69 Fifty-one reptile records were returned within 2km of the Site, relating to slow-worm and adder. Records for adder all relate to Porthkerry country park to the west, whereas the slow-worm records have a much wider distribution, with the closest record 503m north of the Site, basking on the pavement of Montgomery Road.
- 3.70 The Site encompasses some suitable terrestrial habitats for slow-worm and common lizard albeit limited to the grassland and scrub boundaries of the Site. As described previously, the Site itself is isolated with limited dispersal opportunities. The railway line may provide dispersal opportunities; however, this area is commercialised and devoid of vegetation which would otherwise provide suitable cover for these animals.
- 3.71 The populations of reptiles potentially occurring within the Site are considered to be of Site level importance only.

Invertebrates

- 3.72 Records for Priority Species such as garden tiger moth (*Arctia caja*), brown-banded carder bee (*Bombus humilis*), buff ermine moth (*Spilosoma lutea*), knot grass moth (*Acronicta rumicis*), dusky thorn moth (*Ennomos fuscantaria*) and lackey moth (*Malacosoma neustria*) were returned within 500m from the Site. The locally important speckled bush-cricket (*Leptophyes punctatissima*) was recorded 441m north of the Site.
- 3.73 The Site encompasses some suitable habitats for invertebrates albeit limited to the ephemeral/short perennial and bare ground areas, grassland and scrub boundaries of the Site. However, these areas are heavily disturbed and tracked by large plant machinery, with the grassland area isolated by road infrastructure within an urban/commercial surround. The populations of invertebrates on the Site are likely to comprise common and widespread species only and therefore are considered to be of Negligible importance.

SUMMARY OF KEY SURVEY FINDINGS

- 3.74 The key ecological features/receptors pertinent to the development proposals, based on the survey findings described above, are set out below in **Table EDP 3.4**.

Table EDP 3.4: Summary of Ecological Features

Feature	Key Attributes	Ecological Importance
Statutory Designated Sites		
Severn Estuary SAC, SPA and Ramsar	Off-site, 7.7km east. Designated for presence of Annex I habitats and Annex II fish species and internationally important numbers of migratory birds.	International
Cliff Wood – Golden Stairs SSSI/LNR	Off-site, 1.6km west. Mixed woodland.	National
Fferm Walters SSSI	Off-site, 1.7km north-west. Species-rich neutral grassland.	National
Cwm Talwg Woodlands LNR	Off-site, 1km north-west. Deciduous woodland.	County
Non-statutory Designated Sites		
Gladstone Road Pond SINC	586m north-east. Pond – large smooth newt (<i>Lissotriton vulgaris</i>).	County
North Cwm Barri SINC	929m west. Lowland mixed deciduous woodland.	County
Nells Point East SINC	1.1km south-east. Lowland meadow.	County
Species		
Bats	No potential roost features identified on-site. Negligible habitat on-site which is isolated from suitable foraging habitat in the wider landscape.	Roosting- Negligible Commuting/foraging - Site
Breeding Birds	The Site is likely to support a small assemblage of largely common and widespread species due to limited suitable nesting and foraging habitat within the Site.	Site, but legally protected
Other Mammal Species	The Site offers suitable albeit limited foraging and breeding habitats for European hedgehog, albeit isolated by road infrastructure. Given the desk study information there is a reasonable likelihood this species may opportunistically visit the Site.	Site (Priority Species)

Feature	Key Attributes	Ecological Importance
Common Reptiles and Amphibians	As above, the Site offers suitable albeit limited terrestrial habitat for common and widespread reptiles and amphibians such as toad and slow-worm albeit isolated by adjacent development. Given the desk study information and proximity of a railway lone there is a reasonable likelihood that these species may opportunistically visit the Site.	Site, but legally protected

Section 4 Impact Assessment

4.1 This section of the Ecological Appraisal first considers any avoidance/mitigation which is embedded within development design, as represented by the Landscape Illustrative Masterplan provided as **Appendix EDP 1**. It then considers the likely impacts of the development proposals on the pertinent ecological features identified in **Section 3** in the absence of additional mitigation.

EMBEDDED MITIGATION

4.2 EDP has provided input throughout the iterative design process and so the development layout reflects some important measures to avoid, mitigate or compensate for ecological impacts, as well as other measures designed to provide long-term ecological enhancements. This embedded mitigation comprises the following:

- Provision of open green space for campus users with areas of amenity grassland around the frontages of the new building and proposed grass lawn providing benefits to recreation and visual amenity and well as biodiversity;
- Provision of new hedgerow planting around the peripheries of the Site in the west;
- Inclusion of an edible garden providing further benefits to amenity and biodiversity; and
- Implementation of a sustainable drainage strategy to include rain gardens to manage and remediate surface water runoff from new development. Rain gardens in particular will be planted with a mix of herbaceous species, providing a potential foraging resource to protected/notable species.

IMPACTS ON DESIGNATED SITES

Statutory Designations

4.3 As described in **Section 3**, there are five statutory designations within the potential Zone of Influence of the Site. The potential impacts on these designations, in the absence of additional mitigation, are discussed below.

International Designations

4.4 The Severn Estuary Ramsar Site, SPA and SAC lies within 7.7km of the Site, together designated for significant populations of overwintering waterfowl, aquatic species and coastal, intertidal and subtidal habitats.

4.5 In accordance with Part 6 of the Habitats Regulations, a Habitats Regulations Assessment (HRA) is required where a plan or project may give rise to significant effects upon any European site designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the European Community. This includes SACs designated for their habitats

and/or species of European importance, and SPAs classified for rare, vulnerable and regularly occurring migratory bird species. Such requirements also apply to those sites going through the formal designation process, including candidate SACs (cSACs) and Sites of Community Importance (SCIs). Additionally, Government policy also affords the same level of protection to internationally important wetlands (Ramsar sites), potential SPAs (pSPAs), possible SACs (pSACs) and proposed Ramsar Sites, requiring such sites to also be treated as European sites for planning purposes.

4.6 The Vale of Glamorgan Council's LDP was subject to a Habitat Regulation Assessment (HRA) in 2013, which considered the likely significant effects to arise through policies inherent within the LDP including Policy MG2 (Housing Allocations) on European sites within the Zone of Influence. Such designations include the Severn Estuary Ramsar Site, SAC, SPA and Ramsar 7.7km east of the Site. In particular, screening of site allocations identified four main areas of impact arising that may have potential for significant effects on the integrity of designated sites within the Site's Zone of Influence. These four main areas are:

- Water resources - resulting from increased demand for water consumption arising from new residential and employment developments;
- Water quality – resulting from increased discharge requirements arising from new residential and employment developments and the potential for increased point source pollution and/or changes to surface water/run-off;
- Atmospheric pollution – arising from a growth in airborne and surface transport as well as general development (emissions from construction/building stock); and
- Disturbance – predominantly as a result increased recreational activity arising from new residential and employment developments.

4.7 Subsequently, an Appropriate Assessment was undertaken to determine if there is the potential for the LDP to have adverse in-combination effects on the integrity of the identified European sites. The significance of these impacts is dependent to some extent on the location of proposed development.

4.8 The screening found that for the majority of site allocations, there were no pathways for development to have direct impacts on European sites, given the distance of the allocations from designated habitats and species, and the lack of connectivity between the development and the potential receptors whilst indirect effects could be either avoided or mitigated through LDP Policies.

4.9 At the Site level, no direct impacts upon the Severn Estuary Ramsar Site/SPA/SAC are anticipated given the distance and spatial separation of the Site from these designations. Whilst there are no surface waterbodies on-site, there does remain the potential for some level of surface/ground hydrological connection between the Site and the Severn Estuary. As such and in the absence of mitigation, there is potential for there is the potential for more frequent use of the Site and change in use from greenfield to development to increase the level of contaminated surface water runoff to land drains with subsequent negative effects the water quality of the Severn Estuary Ramsar site/SPA/SAC. Inherent within development proposals, however, is the inclusion of sensitive drainage features including rain gardens to manage

surface water run-off from the Site during the operational phase of proposed development. Such features can be designed to accommodate new planting which would provide a new foraging resource for breeding birds, bats and invertebrates.

- 4.10 There does, however, remain the potential for impacts associated with increased contaminated surface water runoff during the construction phase of development which could be transferred further downstream to the Severn Estuary. Pollution incidents could also arise as a result of leaks and spills from construction activities, resulting in the introduction of hydrocarbons and other contaminants from demolition activities, site plant or of sediment loads arising from dust deposition or spoil movement.

National Designations

Cwm Talwg Woodlands LNR and Ancient Semi-natural Woodland

- 4.11 This LNR comprises 2.85ha of deciduous woods in three sections, separated by a residential development. The LNR is situated 1km to the north-west of the Site with the largest section of woodland also classed as an Ancient Semi-Natural Woodland. It is separated from the Site by residential development with no known hydrological connection to the proposed development. Due to the spatial separation to the Site and lack of ecological or hydrological connectivity, no direct or indirect effects are anticipated to arise upon on this designation.

Cliff Wood - Golden Stairs SSSI/LNR

- 4.12 This designation is part of Porthkerry Country Park and is located 1.6km to the west of the Site.
- 4.13 There is no known hydrological connection between the Site and this non-statutory designation and combined with its spatial separation from the Site, no direct are considered likely to arise. Consideration has been given to the sensitivity of habitats therein to trampling/degradation arising from recreational pressures given public accessibility. Given the nature of development, however, comprising an educational facility with no proposed residential accommodation, such effects are not considered significant whilst inherent in the Landscape Illustrative Masterplan is the inclusion of formal open green space to provide benefits to visual amenity and recreation on-site.

Fferm Walters SSSI

- 4.14 Fferm Walters SSSI comprises a large area of species-rich grassland approximately 1.7km north-west of the Site, to which there is no public access or ecological/hydrological connectivity. As such, no direct or indirect effects are considered likely to arise following development of the Site.

Non-statutory Designations

- 4.15 As described in **Section 3**, there are seven SINCs within the potential Zone of Influence of the Site. For the majority, non-statutory designated sites are considered sufficiently distant from the Site such that no direct or indirect impacts are anticipated. With respect to North Cwm Barri SINC and Nells Point East SINC, consideration has been given to the potential for trampling/degradation of valued habitats arising from recreational pressures. Given the nature of development, however, comprising an educational facility with no proposed residential accommodation, such effects are not considered significant.

IMPACTS ON HABITATS

- 4.16 Habitats within and immediately adjacent to the Site have been assessed through an Extended Phase 1 Habitat survey. Overall, the Site was found to be dominated by hardstanding, bare ground and poor semi-improved grassland with semi-natural habitat considered to be of Negligible or Site level importance only.
- 4.17 Development proposals will result in the loss of all semi-natural habitat present across the Site including poor semi-improved grassland, scrub and amenity tree planting. Given the extent and distribution of habitats present combined with their low distinctiveness and/or botanical diversity, however, such losses are not considered significant. Furthermore, and inherent within development proposals, is the provision of new landscape planting comprising areas of grassland and tree, hedge and shrub planting providing potential benefits to biodiversity compared with baseline conditions.

IMPACTS ON PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding Birds

- 4.18 In general, scrub and semi-mature trees supported by the Site provide some nesting opportunities for common and widespread bird species. The loss of potential bird nesting habitats following development of the Site will primarily be limited to these habitats with associated impacts upon a bird assemblage not considered significant.
- 4.19 In the absence of mitigation, there is the potential for disturbance of nesting and foraging habitat located off-site (i.e. any vegetation associated with adjacent railway line) through light spill, noise, visual and human disturbance during construction and operation could potentially occur. Birds' sensitive to such disturbance could abandon nests and breeding territories, and become displaced from other populations whilst repeated disturbance during foraging behaviours may result in a decline in fitness.
- 4.20 Of further pertinence, is the potential for clearance of vegetation to result in direct harm/injury to nesting birds if present. However, the legal protection afforded to birds and their nest (their eggs and young) and the requirement to avoid commencement of such works during the breeding bird season is considered inherent mitigation to ensure no effects relating to direct harm/injury arise in respect of the breeding bird assemblage. Therefore, negligible impact is predicted.

Bats

Impacts on Roosting Bats

- 4.21 During the preliminary ground level assessment of trees undertaken during the Extended Phase 1 Habitat survey in May 2023, no trees were identified with suitable features for roosting bats. The majority of the tree stock was young to early mature standards with no observable features from the ground, and none of an age or condition likely to support unseen features. Additionally, there were no buildings or structures on-site supporting potential roost features. As such, no impacts to roosting bats are anticipated following development of the Site.

Impacts on Foraging/Commuting Bats

- 4.22 Although no detailed bat activity surveys were considered necessary in this instance, the Site is considered to be of limited value to a foraging/commuting bat assemblage due to the limited extent of semi-natural habitats which are further considered sub-optimal given their poor floristic and structural diversity. Overall, the Site is relatively isolated from suitable habitat in the wider landscape by adjacent development with the adjacent railway line providing limited opportunities for dispersal. Such minor loss of poor semi-improved grassland, scrub and amenity planting, in the context of a foraging/commuting bat assemblage is, considered negligible.
- 4.23 Should low numbers of bats utilise the Site for commuting between their roosts and foraging ground in the wider landscape, there is the potential for disturbance impacts associated with increased lighting, or light spill on to the boundary habitats (namely limited vegetation cover associated with the adjacent railway line). However, the Site is already subject to some disturbance given its current use and location within an urbanised area of Barry and subject to background levels of lighting, such that impacts are considered negligible. Inherent within the Landscape Illustrative Masterplan is the provision of new hedgerow planting along part of the northern, western and part of the southern boundaries of the Site, which will provide new opportunities for a bat assemblage and provide a vegetated, linear feature for their dispersal across the Site in the long term.
- 4.24 Considered alongside implementation of those inherent mitigation measures detailed above in relation to habitats, no significant detrimental impacts upon the foraging/commuting bat assemblage are considered likely.

Common Reptiles, Amphibians and other Mammals

- 4.25 The desk study identified records for European hedgehog, a Priority Species of conservation importance within 500m of the Site, in addition to records of common amphibians and reptiles. The grassland, scrub and amenity planting areas may offer some limited commuting and foraging potential and there is a reasonable likelihood that these species may be present and opportunistically using the Site. Overall, the reduction of available habitat to European hedgehog, common amphibians and reptiles is considered negligible. In the absence of additional mitigation there is, however, the potential for disturbance and killing/injury of such species during vegetation clearance and following increased levels of traffic movements by vehicles, machinery and plant throughout the construction and operational phases of development.

Section 5 Mitigation and Enhancement Strategy

- 5.1 This section of the Ecological Appraisal considers the impacts set out in **Section 4** and puts forward additional measures to firstly avoid any ecological impact, and if this is not possible then to minimise the likely impacts of the proposed development to insignificant levels, to comply with relevant planning policy and avoid any infringement of relevant legislation.
- 5.2 This section also sets out proposed ecological enhancements for the Site, in line with the wording within PPW and local planning policy, requiring developments to contribute to and enhance the natural and local environment whilst providing net biodiversity benefits.

DESIGNATED SITES

Statutory Designations

- 5.3 To protect water quality of the Severn Estuary Ramsar Site/SPA/SAC, appropriate pollution control measures will be employed in accordance with the relevant Pollution Prevention Guidelines (PPGs) published by the Environment Agency, namely PPG1 'General Guide to the Prevention of Pollution', PPG5 'Works and Maintenance in or Near Water', PPG6 'Pollution Prevention Guidance for Working at Construction and Demolition Sites', and PPG21 'Pollution Incident Response Planning', to ensure that detrimental effects on nearby watercourse as a result of surface run-off, spillage and pollution arising throughout the construction phases are avoided.
- 5.4 Subject to the implementation of the measures summarised above and inherent mitigation previously discussed in **Section 4**, impacts on statutory designations will be avoided or reduced to insignificant levels, such that the development can be delivered in accordance with relevant legislation and planning policy.

HABITATS

- 5.5 Measures required to protect habitats present within the wider landscape, such as local water courses, is to be detailed within the appointed contractor's Construction Environmental Management Plan (CEMP). The CEMP will define which construction activities will be excluded or carefully controlled in order to avoid or minimise harm and detail the general environmental protection measures to be employed, including control of dust and other pollutants.
- 5.6 This will be combined with the provision of new tree, hedgerow and shrub planting, along with grassland creation to compensate for loss of habitats and deliver net benefits to biodiversity. A Planting Strategy for the scheme, illustrating proposed habitat creation, is provided at **Appendix EDP 2**. New habitat features will include:
- Provision of open green space for campus users, with areas of amenity grassland around the frontages of the new building and proposed grass lawn, combined with some wildflower grassland planting along the margins of this feature;

- Provision of new native hedgerow planting around the peripheries of the Site in the west, with formal hedge planting also provided to the frontage of the building and amenity areas;
 - New tree and shrub planting across the Site in association with the building, car parking areas and open green space;
 - The creation of a green roof in association with the proposed bin storage area;
 - Inclusion of an edible garden; and
 - Planting of rain gardens with herbaceous species.
- 5.7 It is, however, recommended that a planting schedule incorporates a mix of native species of local provenance, reflecting the local character and biodiversity of the surrounding landscape and/or fruit/nectar-bearing specimens of value as a foraging resource to a local bird and invertebrate assemblage.
- 5.8 In addition, the scheme should implement a sensitive lighting strategy to ensure no/limited light spill occurs within close vicinity to newly created boundary features and/or off-site habitats. Where lighting is required along road/pedestrian routes adjacent, lighting columns should be sited within the development footprint itself and directed away from habitat edges to minimise disturbance and light spill. Lighting should include directional, timed and/or low-lux lighting, utilising shields and/or hoods where required.
- 5.9 The proposed measures described above would ensure there is an overall net benefit to habitats of ecological value within the Site, thereby potentially resulting in positive effects at the Site level.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding Birds

- 5.10 Given the protection afforded to all breeding birds, their nests, eggs and young, sensitive vegetation clearance (and building demolition) required during the pre-construction and construction phases of development should be timed to avoid the main bird breeding season (i.e., March to August inclusive). Should this seasonal constraint prove impracticable (for example, due to conflicts with requirements for other protected species and construction programme), then vegetation clearance/building demolition outside of this period should only commence following the advice and under supervision of a suitably qualified ecologist. Pre-commencement checks for active nests will be required prior to any vegetation clearance occurring during the main bird breeding season, with appropriate buffers marked out around active nests or nests under construction, until all eggs have hatched, and chicks fledged.
- 5.11 Those habitat creation measures previously detailed above in relation to habitats will mitigate for the minor proposed loss of bird nesting habitats. It is further recommended that a planting schedule include native fruiting species of value as a foraging resource to a bird assemblage.
- 5.12 Further enhancement of bird nesting opportunities is also proposed through installation of bird boxes on the new building. The following nest boxes are recommended in this instance:

- 1SP Schwegler Sparrow Terrace or similar to be installed on the northern or eastern elevations of the proposed building; and
- Schwegler 17A Swift boxes or similar to be installed on the northern or eastern elevations of the proposed building.

5.13 In each instance, boxes should be hung at a minimum height of 3m or higher above-ground level (ideally below the eaves of the building) with the entrance facing away from prevailing winds and sources of light and within or immediately adjacent to good tree or shrub cover to increase the shelter and food source available to nestlings. When installed, birds should have a clear flight path to the nest without clutter directly in front of the entrance.

Bats

5.14 Those habitat creation measures detailed above in relation to habitats and breeding birds will provide adequate compensation for minor losses arising across the Site. In particular, the provision of new hedgerow planting along part of the northern southern and western boundaries of the Site will provide/strengthen wildlife corridors across the Site, potentially facilitating the dispersal of a bat assemblage across the wider landscape.

5.15 To avoid disturbance of a foraging/commuting bat assemblage during construction however, working at night and the use of night lighting should be avoided. Where this is not possible (i.e., for security reasons), lighting should be kept to the lowest permissible level through the use of sensitive lighting design, as detailed above in respect to habitats, and directed away from site boundaries, namely the northern and western boundaries with the railway line. This should be combined with implementation of a sensitive lighting strategy during the operational phase of development to ensure that retained habitats adjacent to the Site (the northern and western boundaries with the railway line), potentially used by light-sensitive species such as bats will not be adversely lit.

5.16 To provide net benefits to biodiversity and thus comply with national and local planning policy, bat roost features (such as Schwegler 1F bat tubes or similar), are also recommended for inclusion within the exterior of the new building where possible. In general, bat tubes should be installed on the south-east/south-west facing aspect where possible and away from sources of artificial lighting.

5.17 Subject to the implementation of those key mitigation measures detailed above with respect to bats and previously with respect to habitats and breeding birds, no significant detrimental impacts upon the foraging/commuting bat assemblage utilising the Site are likely to arise with potential to deliver a beneficial effect on the local bat assemblage.

Other Mammals/Common Amphibians and Reptiles

5.18 Given the limited potential of the Site to support low numbers of common reptiles, common amphibians and other mammals with European hedgehog confirmed present on-site, a precautionary approach to habitat clearance is recommended to ensure no harm to these species. Although the presence of hedgehog, common reptiles and amphibians is considered unlikely, it is recommended that precautionary mitigation measures (e.g., sensitive vegetation clearance) are employed when suitable vegetation is cleared, to avoid the accidental killing

or injury of reptiles (or hedgehog/other amphibian species) during construction. The precautionary approach below is therefore proposed.

5.19 Clearance of any suitable vegetation should be undertaken in accordance with the following precautionary methods of working.

- Vegetation clearance should be undertaken between the late spring and early autumn months so as to avoid the main hibernation period of hedgehog and common reptiles/amphibians (typically considered to be between October and March). As such, works will coincide with the bird breeding season (typically March to August inclusive). A pre-commencement check for active bird nests will be undertaken by a suitably qualified ecologist immediately prior to the commencement of works. Where an active bird nest is identified, a suitable buffer will be established around the active nest, with no clearance works permitted within this buffer until all young have fledged and the nest confirmed inactive by the ecologist;
- Should the above seasonal constraint be considered impracticable, then clearance works between late October and March inclusive may require pre-commencement checks and/or supervision by a suitably qualified ecologist to ensure no disruption to potential hibernacula, with the adoption of additional precautionary measures as appropriate;
- All areas of semi-natural habitat to be cleared will be subject to directional cutting over two phases. The first phase of clearance will require an initial cut of the vegetation, reducing vegetation height down to a minimum of 200mm, with clearance directed towards adjacent retained habitat. The area will be left for a period of at least 24 hours to give any animals present the opportunity to disperse into the adjacent retained habitat. Thereafter, vegetation will be cut to ground level;
- All arisings will be removed on the same day as cutting and vegetation will be maintained thereafter at a height no greater than 30mm, through regular mowing or strimming, or as bare ground to discourage common reptiles and amphibians from returning;
- Any below-ground earthworks associated with tree or scrub removal should be undertaken over the summer months (i.e., May to September inclusive) to avoid harm to any hibernating individuals potentially present; and
- Any potential refugia identified on-site to be disassembled by hand to avoid accidental killing/injury.

5.20 More generally, however, and particularly in respect of hedgehog, the following precautionary measures will be adhered to during the construction phase:

- All machinery will be operated by trained personnel only;
- There will be no working at night;
- All trenches/excavations will be covered up overnight and/or a means of escape provided (such as mammal ramps) to avoid wildlife becoming trapped; and

- Any open pipework with an outside diameter of greater 120mm must be covered at the end of each working day to prevent animals entering/becoming trapped.

5.21 The provision of green open space within the proposed development will serve to enhance the Site's overall suitability for long-term use by wildlife dispersing through a predominantly urban landscape.

Section 6 Summary and Conclusions

6.1 **Table EDP 6.1** provides an overview of Mitigation and Enhancement Strategy described in **Section 5**.

Table EDP 6.1: Summary of Proposed Mitigation and Enhancement

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
Avoid by design.	Implementation of a sustainable drainage strategy.	Embedded in the drainage strategy which will be an 'approved plan' to which future development must align.
Avoid or minimise construction impacts.	Recommended sensitive methods of operation during enabling and construction works: <ul style="list-style-type: none"> • Control of working hours; • Minimise noise and vibration; • Air quality measures/dust suppression; • Surface water management; • Storage of fuels/chemicals; and • Sensitive lighting. 	To be provided within the appointed contractor's CEMP.
	Methods to avoid harming individuals or interfering with breeding of protected species prior to/during habitat destruction: <ul style="list-style-type: none"> • Pre-commencement checks/surveys; • Timings to avoid sensitive periods/breeding seasons; • Phased vegetation clearance; • Destructive searches; and • Supervision by Ecological Clerk of Works (ECoW). 	To be provided within the appointed contractor's CEMP.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
Mitigate or compensate for habitat loss and deliver net gains.	Habitat creation: <ul style="list-style-type: none"> • Edible garden comprising native fruit trees; • Hedgerow planting around westernmost peripheries of the Site; • Tree and shrub planting along the boundaries of the Site, to the frontage of the building and in association with open green space/amenity areas; • Provision of amenity and wildflower grassland areas; • Inclusion of a green roof atop the proposed bin store; and • Inclusion of native planting within proposed rain gardens. A planting scheme should utilise native species, preferably of local provenance with provision of areas of species-rich grassland, managed for wildlife.	Space for new habitat embedded in Illustrative Landscape Masterplan, which will be an 'approved plan' to which detailed designs must align.
	Habitat features to be provided in suitable locations: <ul style="list-style-type: none"> • Bat bricks; and • Bird boxes. 	Design measures embedded within this Ecological Appraisal report which will be an 'approved document' to guide implementation of ecological mitigation/enhancement.
	Operational lighting strategy to avoiding disturbance of nocturnal species, in particular foraging/commuting bats.	Design measures embedded within this Ecological Appraisal report which will be an 'approved document' to guide implementation of ecological mitigation/enhancement.
Maintenance, Monitoring and Management post-construction.	Habitat-specific, namely measures to: <ul style="list-style-type: none"> • Ensure new habitat becomes established; and • Monitor and maintain habitats in good ecological condition once established. 	Design measures embedded within this Ecological Appraisal report and Illustrative Landscape Masterplan which will be an 'approved document/plan' to guide implementation of ecological mitigation/-enhancement.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
	Species-specific, namely measures to: <ul style="list-style-type: none"> • Maintain habitat features (boxes, etc.) in good condition or replace as necessary. 	Design measures embedded within this Ecological Appraisal report which will be an 'approved document' to guide implementation of ecological mitigation/enhancement.

- 6.2 EDP's desk-based and field-based baseline investigations have demonstrated that those habitats and species present within and around the Site do not pose a significant ecological constraint to the proposed development that is the subject of this Appraisal, given the limited extent of sensitive ecological features present combined with the dominance of built development in the wider landscape.
- 6.3 However, EDP's surveys have identified some habitat features of Site level importance which also have the potential to support protected species. Grassland, tree/shrub planting dense scrub provide suitable, albeit limited, habitat for breeding birds, common reptiles, amphibians, European hedgehog and a local bat assemblage.
- 6.4 As such, EDP has provided specific proposals for the avoidance, mitigation and compensation of any predicted impacts. These measures include those already embedded within the development proposals; measures recommended for incorporation at the construction stage; and those which have been recommended for inclusion within the landscaping scheme.
- 6.5 EDP concludes that, in light of the embedded mitigation and subject to the full implementation of the additional measures summarised above, the proposed development is capable of compliance with relevant planning policy and legislation and can deliver net benefits for wildlife and biodiversity.

Appendix EDP 1
Landscape Illustrative Masterplan
(Ares Landscape Architects, VG0201-ALA-00-XX-DR-L-00001, Rev P05)



L01 Terrace Illustrative Masterplan SCALE 1:250

Note
 1. Do not scale from this drawing
 2. To be read in conjunction with Project Risk Register REF: VG0201-ALA-00-XX-RG-L-00001
 3. To be read in conjunction with all other Landscape Architect's drawings

- KEY**
- (A) ENTRANCE PLAZA
 - (B) BIN STORE
 - (C) DOUBLE STACKED CYCLE STORAGE
Number of spaces: 160 long stay, 10 short stay
 - (D) CAR PARK ACCESS
Automatic barrier with intercom to reception and double gate to enable site to be secured when needed
 - (E) OUTDOOR DINING
 - (F) FEATURE TREES & RAIN GARDEN
 - (G) GRASS LAWN
For socialising and outdoor learning
 - (H) DROP OFF ZONE
 - (I) AIR SOURCE HEAT PUMP
 - (J) CARPARK
93 spaces (inc. 10no. EVCPs and 4 Accessible Bays)
2 x Minibus Parking
 - (K) SPINKLER & PUMP HOUSE
 - (L) ACCESS ROUTE
For refuse, maintenance and kitchen deliveries only
 - (M) L01 ILS TERRACE
Including shed, greenhouse, Horticulture planting, canopy and external seating
 - (N) PV CANOPY
 - (O) SITE EGRESS
For refuse, maintenance and kitchen deliveries only
 - (P) HEDGE
 - (Q) MOTORCYCLE PARKING
3no. spaces
 - (R) GAS KIOSK
 - (S) EDIBLE GARDEN
 - (T) BATTERY
 - (U) STORAGE SHED
 - (V) GENERATOR

ID	RISK	MITIGATION	DATE MITIGATED
RESIDUAL PROJECT RISKS			

DATE	REV	DESCRIPTION OF REVISION	DRAWN BY	APPROVED BY
20/03/2024	P05	Issued for Planning	MDS	MH

REVISIONS

STATUS
A2 - Authorized and Accepted as Planning Application Submission

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PROJECT TITLE:
Barry Waterfront Campus

DRAWING TITLE:
Landscape Illustrative Masterplan

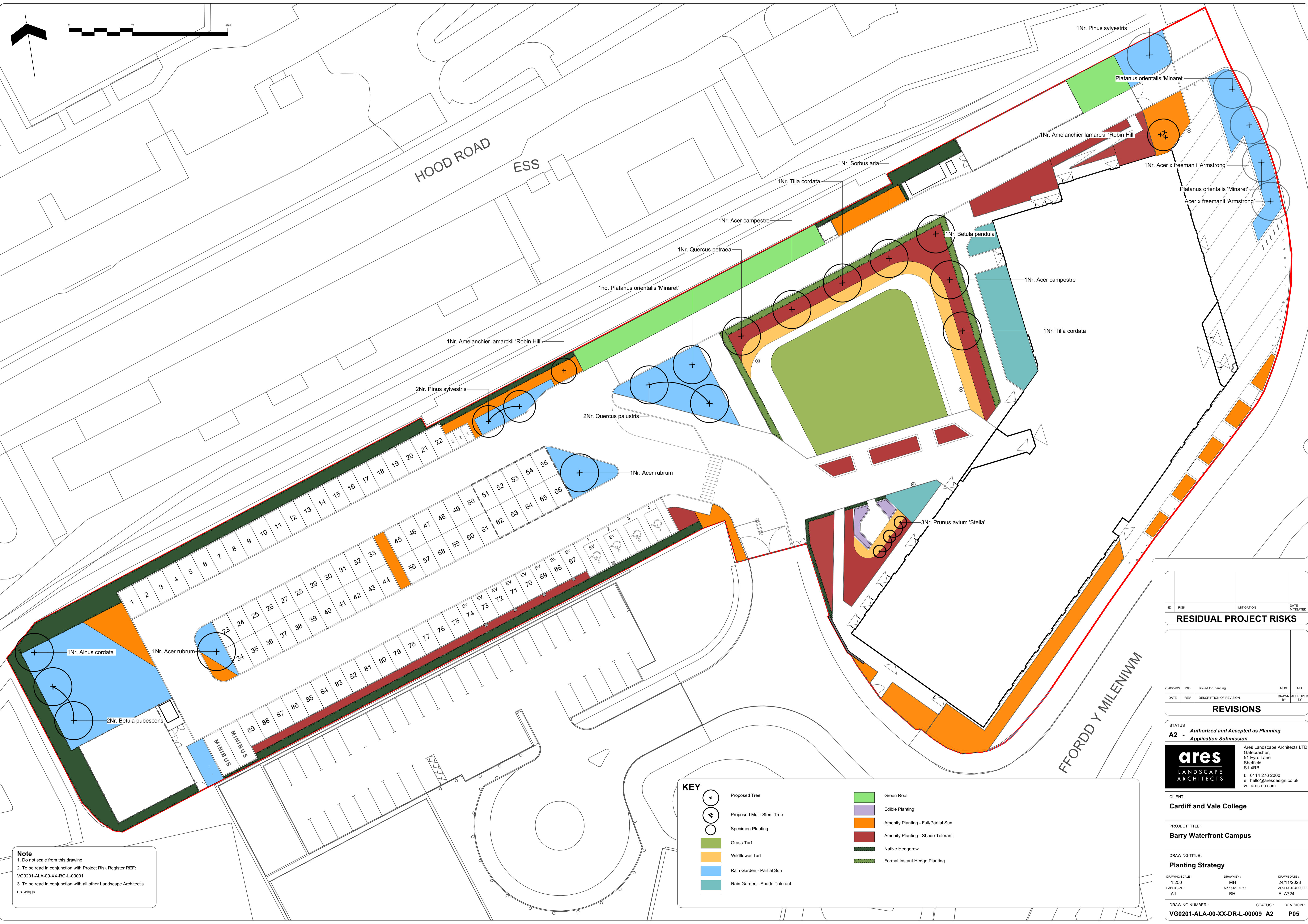
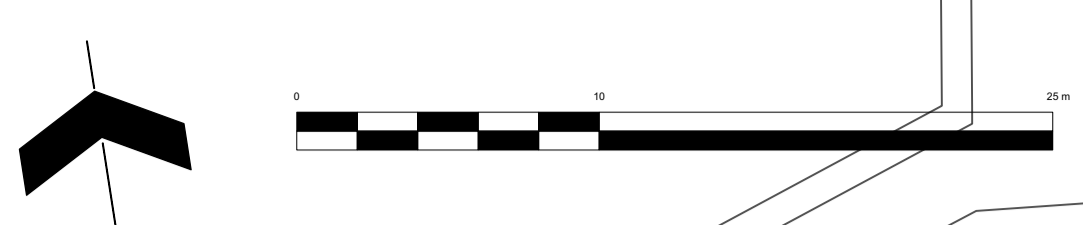
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DRAWN BY: HS
 APPROVED BY: HT

DATE: 15/06/2022
 ALA PROJECT CODE: ALAT24

DRAWING NUMBER: VG0201-ALA-00-XX-DR-L-00001 A2
 STATUS: P05
 REVISION:

Appendix EDP 2
Planting Strategy
(Ares Landscape Architects, VG0201-ALA-00-XX-DR-L-00009, Rev P05)



Note
 1. Do not scale from this drawing
 2. To be read in conjunction with Project Risk Register REF: VG0201-ALA-00-XX-RG-L-00001
 3. To be read in conjunction with all other Landscape Architect's drawings

KEY

	Proposed Tree		Green Roof
	Proposed Multi-Stem Tree		Edible Planting
	Specimen Planting		Amenity Planting - Full/Partial Sun
	Grass Turf		Amenity Planting - Shade Tolerant
	Wildflower Turf		Native Hedgerow
	Rain Garden - Partial Sun		Formal Instant Hedge Planting
	Rain Garden - Shade Tolerant		

ID	RISK	MITIGATION	DATE MITIGATED
RESIDUAL PROJECT RISKS			

DATE	REV	DESCRIPTION OF REVISION	DRAWN BY	APPROVED BY
20/03/2024	P05	Issued for Planning	MDS	MH

REVISIONS

STATUS:
A2 - Authorized and Accepted as Planning Application Submission

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PROJECT TITLE:
Barry Waterfront Campus

DRAWING TITLE:
Planting Strategy

DRAWING SCALE: 1:250	DRAWN BY: MH	DRAWN DATE: 24/11/2023
PAPER SIZE: A1	APPROVED BY: BH	ALA PROJECT CODE: ALAT24

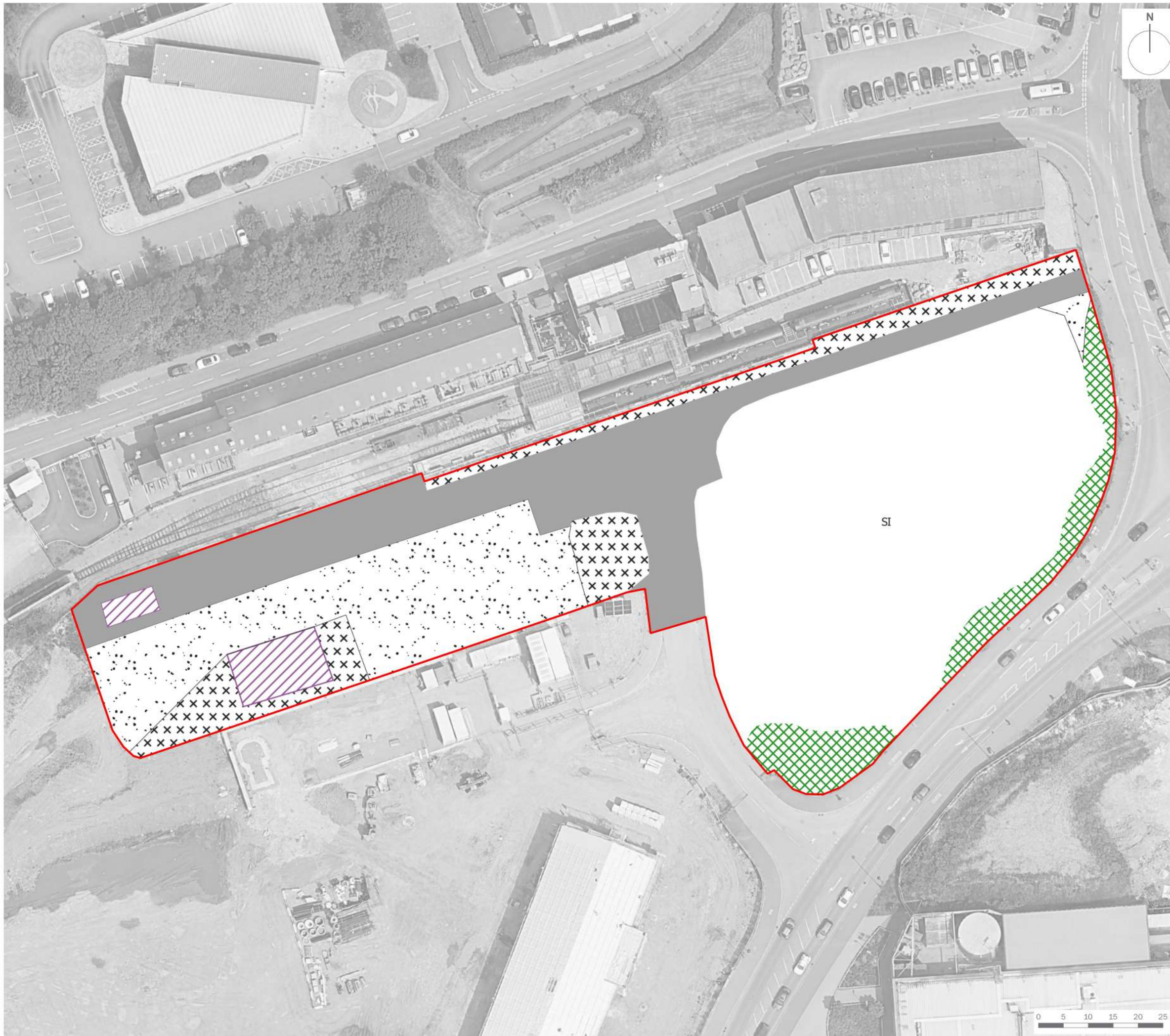
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Plans

Plan EDP 1: Phase 1 Habitat Survey
(edp8159_d003 22 November 2023 MCa/KJa)

Plan EDP 2: Statutory Designations
(edp8159_d001 23 August 2023 MCa/KJa)

Plan EDP 3: Non-statutory Designations
(edp8159_d002 23 August 2023 GYo/KJa)



-  Site Boundary
-  Dense Continuous Scrub
-  Amenity Planting
-  Ephemeral/Short Perennial
-  SI Poor Semi-improved Grassland
-  Hardstanding
-  Bare Ground

client
Cardiff and Vale College

project title
Barry Waterfront Campus


drawing title
Phase 1 Habitat Survey

date	22 NOVEMBER 2023	drawn by	MCa
drawing number	edp8159_d003	checked	KJa
scale	1:750 @ A3	QA	GYo



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-  Site Boundary
-  Range Rings (at 2km and 10km)
-  Ramsar Site
-  Special Area of Conservation (SAC)
-  Special Protection Area (SPA)
-  Site of Special Scientific Interest (SSSI)
-  Local Nature Reserve (LNR)

client
Cardiff and Vale College

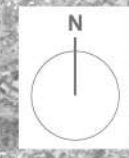
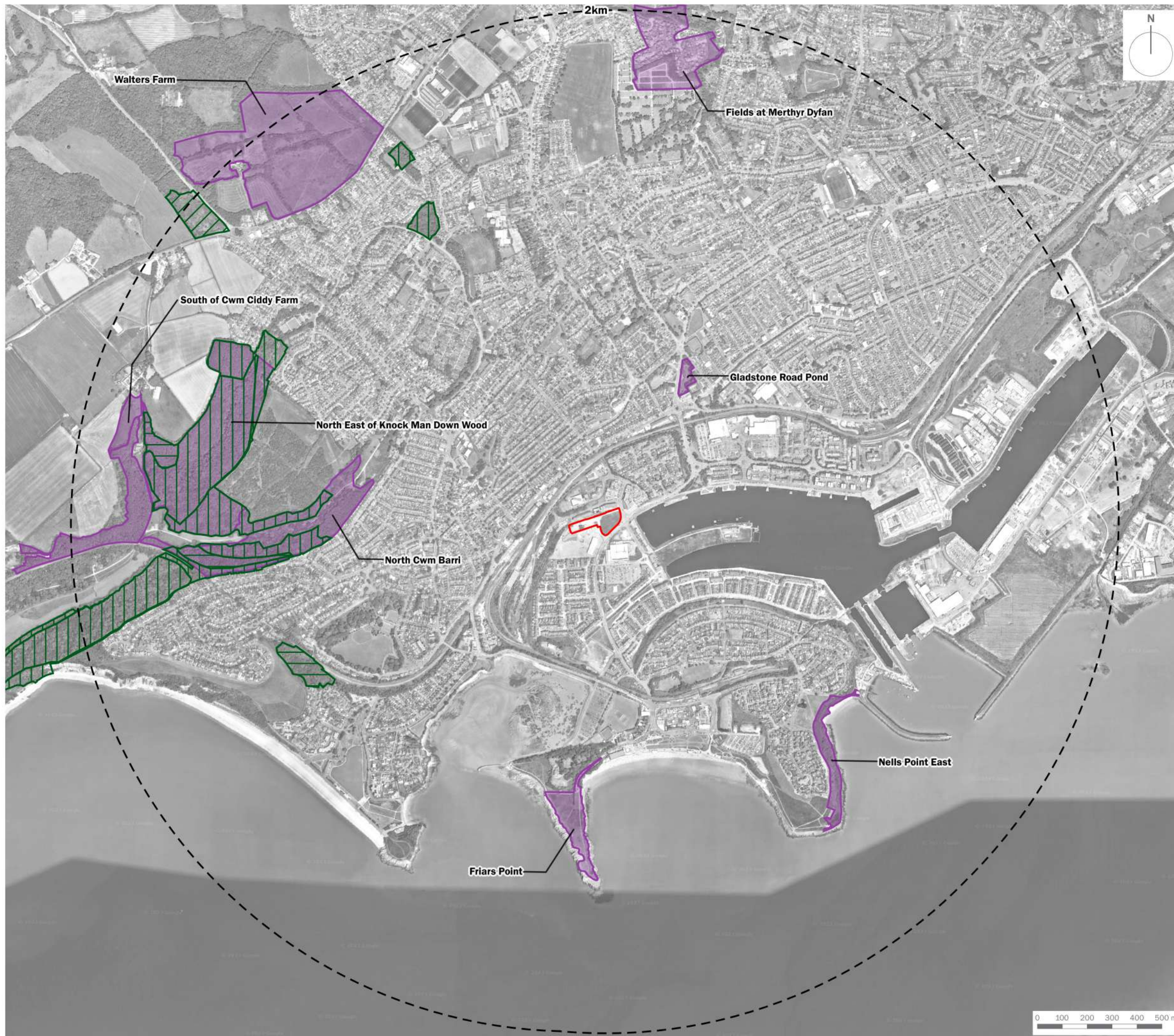
project title
Barry Waterfront Campus

drawing title
Statutory Designations

date	23 AUGUST 2023	drawn by	MCa
drawing number	edp8159_d001	checked	KJa
scale	1:75,000 @ A3	QA	GYo



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- Site Boundary
- 2km Study Area
- Wildlife Site/Site of Importance for Nature Conservation
- Ancient Semi-natural Woodland
- Restored Ancient Woodland Site
- Ancient Woodland Site of Unknown Category

client	Cardiff and Vale College	
project title	Barry Waterfront Campus	
drawing title	Non-statutory Designations	
date	23 AUGUST 2023	drawn by GYo
drawing number	edp8159_d002	checked KJa
scale	1:15,000 @ A3	QA VMS



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