



Pengam Moor, Cardiff

DRAFT

**Preliminary Ecological
Appraisal**

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

On behalf of:
Cardiff Council

May 2026

Report Reference
edp9601_r001

Document Control

DOCUMENT INFORMATION

Client	Cardiff Council
Report Title	Preliminary Ecological Appraisal
Document Reference	edp9601_r001_DRAFT

VERSION INFORMATION

	Author	Formatted	Peer Review	Proofed by/Date
001_DRAFT	EWi	FMi	KHe	-

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APPENDICES

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PLANS

- Plan EDP 1: Statutory Designations
(edp6901_d001 18 February 2026 GYo/EWi)
- Plan EDP 2: Non-statutory Designations
(edp9601_d008 11 May 2026 JGr/EWi)
- Plan EDP 3: Phase I Habitat Plan
(edp9601_d002 18 February 2026 GYo/EWi)

Section 1 Introduction

- 1.1 This Preliminary Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Cardiff Council (hereafter referred to as 'the Client'), in relation to land at Pengam Green, Cardiff (hereafter referred to as 'the Study Area'). This Preliminary Ecological Appraisal provides a high-level assessment of the Study Area with respect to identifying key ecological constraints and opportunities to inform its future development.
- 1.2 A planning application is proposed for the development of a new Gypsy and Traveller Site across circa 8.5 hectares (ha) of land located within a larger Study Area, hereafter referred to as the Application Site. A plan illustrating the proposed general arrangement of new development across the Application Site is provided at **Appendix EDP 1**.
- 1.3 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.
- 1.4 EDP is an independent environmental planning consultancy with offices in Elkstone, 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

- 1.5 The Study Area is centred approximately at Ordnance Survey Grid Reference ST 21445 76996. The local planning authority (LPA) is Cardiff Council (CC). The location and extents of the Study Area are illustrated on **Plans EDP 1 to 3**.
- 1.6 The Study Area measures approximately 51 ha and is located on the edge of the district of Tremorfa and, for the most part is nestled between Rover Way which delineates its eastern and northern boundary, Seawall Road and Celsa Manufacturing UK steelworks lie to the south, with residential development located to the west and north. The Study Area also encompasses an additional parcel of land which encompasses an existing Gypsy Traveller Site located to the east of Rover Way. The Severn Estuary Coastline lies directly adjacent to

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

the furthest eastern boundary of the Study Area, whilst the Rhymney River lies within 50m of the northern boundary at its closest point. Cardiff City Centre is located circa 2km west of the Study Area.

- 1.7 For the purpose of this report, the Study Area itself may be subdivided into five broad areas including: land east of Rover Way, encompassing an existing Gypsy and Traveller site; the boundaries of Pengam Moors Site of Importance for Nature Conservation (SINC), encompassing areas of scrub, woodland and grassland; the Application Site, comprising circa 5ha of land within Pengam Moors SINC; Tremorfa Park, characterised by amenity playing fields and parkland trees; and the grounds of Willows High School.

SCOPE OF THE REPORT

- 1.8 The purpose of this preliminary ecological assessment is to identify potential constraints and opportunities for future development of both the Application Site and the Study Area and thereby inform an emerging masterplan design that is constraint-led. To this end, this report describes the current ecological interest within and around the Study Area, which has been identified through standard desk- and field-based investigations. 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 Study Area (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 any pertinent ecological features/receptors that require further consideration; and
 - **Section 4** briefly summarises the findings that are relevant to inform its potential to support development and conclusions of initial survey findings.

Section 2 Baseline Methodology

2.1 This section of the Preliminary Ecological Appraisal summarises the methodologies employed in determining the baseline ecological conditions within and around the Study Area. 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 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 Biodiversity Records Centre (SEWBRc); and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website⁴.

2.4 The desk study was undertaken during April 2026 and involved obtaining the following information:

- International statutory designations (10km radius around the Study Area);
- National statutory designations and non-statutory local sites (2km radius);
- Annex II bat species⁵ records (6km radius); and
- All other protected, priority⁶ and notable⁷ species records (2km radius).

2.5 These search areas are considered sufficient to cover the potential Zones of Influence (Zol)⁸ of 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 (Zol) - the areas and resources that may be affected by the proposed development

- 2.6 The adopted Cardiff Local Development Plan⁹ and Cardiff Green Infrastructure Supplementary Planning Guidance¹⁰ were also reviewed as part of the desk study to understand local priorities with regard to protection of ecological features/biodiversity.

Limitations

- 2.7 Data sourced from biological records centres, or obtained using on-line databases comprise historical information, and datasets may be incomplete, inaccurate, or missing entirely. It is therefore important to note that even where data is held, a lack of records for a defined geographical area does not necessarily indicate that a given species is absent from that area; the area may simply be under-recorded.

EXTENDED PHASE 1 HABITAT SURVEY

- 2.8 The survey technique adopted for the initial habitat assessment was at a level intermediate between a standard Phase 1 survey technique¹¹, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an Extended Phase 1 habitat survey. This level of survey does not aim to compile a complete floral and faunal inventory for the Study Site.
- 2.9 The level of survey involves identifying and mapping the principal habitat types and identifying the dominant plant species present in each principal habitat type. In addition, any actual or potential protected species or species of principal importance¹² are identified and scoped.
- 2.10 An Extended Phase 1 habitat survey of the Study Area was completed by a suitably experienced surveyor from EDP on 22 January and 02 February 2026, during which the weather was overcast with rain showers, light to no wind and 10 °C on both occasions.

Limitations

- 2.11 Whilst an Extended Phase 1 survey can be undertaken at any time of the year, January/February is during the sub-optimal period when a number of flowering plants will not be apparent. Identification of grassland communities in particular was further compounded by heavy grazing pressure and poaching across the Study Area. For the most part, sufficient vegetation was identified during the survey to provide an understanding of the site, its habitats and any potential implications this may have on future development proposals. An assessment of grassland habitat associated with the boundaries of Pengam Moors SINC, however, was particularly constrained such that the value of grassland communities here may have been underestimated and likely will continue to be so even

⁹ Cardiff Council (2016). Cardiff Local Development Plan (2006-2026). Available at: <https://www.cardiffldp.co.uk/wp-content/uploads/Final-Adopted-Local-Development-Plan-English.pdf> [Accessed on 18 February 2026]

¹⁰ Cardiff Council (2017). City of Cardiff Council Green Infrastructure Supplementary Planning Guidance. Available at: <https://cardiff.moderngov.co.uk/documents/s18690/Item%209%20App%201%20SPG%20Green%20Infrastructure.pdf> [Accessed on 18 February 2026]

¹¹ 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).

¹² 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.

during the optimal season given intense grazing pressure. Subsequently, an assessment will have regard to the citation for Pengam Moors SINC.

BADGER SURVEY

2.12 A survey for signs of badger (*Meles meles*) activity was undertaken by EDP on 22 January and 02 February 2026 during the Extended Phase I habitat survey. During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified the following signs of badger activity were searched for, in order to determine whether they were currently in active use:

- Fresh spoil outside entrances;
- Old bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter;
- Badger guard hairs; and
- Fresh tracks leading to/from the holes.

LIMITATIONS

2.13 Dense scrub and woodland precluded a thorough inspection of the Study Area, such that evidence of badger may have been missed. This is not considered to have affected the outcome of this assessment however, with sufficient data collected to inform potential constraints and opportunities to future development.

Section 3 Baseline Results

- 3.1 This section of the Preliminary Ecological Appraisal report summarises the baseline ecological conditions determined through the course of desk- and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Study Areas' potential Zol, and which are pertinent in the context of potential development of the Application Site and wider Study Area.

DESIGNATED SITES

- 3.2 Information regarding designated sites was obtained during the desk study from the MAGIC website and local records centre (SEWBReC). 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

- 3.3 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).
- 3.4 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).
- 3.5 The legal protection of SACs, SPAs, Ramsar Sites and SSSIs is also reflected in policies included within Planning Policy Wales 12 (February 2024) (PPW) and within Technical Advice Note 5: Nature Conservation and Planning (TAN5), which are a material consideration during the planning application process. Further consideration is afforded to the protection SSSIs within recent updates to Chapter 6 of PPW, published during October 2023, with increased clarity on the position for site management and exemptions for minor development necessary to maintain a 'living' landscape, and contribute to an ecologically coherent and resilient network of protected sites and linkages between these. Other development is considered unacceptable as a matter of principle.
- 3.6 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.
- 3.7 Statutory designations are also recognised as key natural assets within the Cardiff Local Development Plan, specifically Policy KP 16 (Green Infrastructure) and EN5 (Designated Sites). Specifically, EN5 states:

“Development will not be permitted that would cause unacceptable harm to sites of international or national nature conservation importance. Development proposals that would affect locally designated sites of nature conservation and geological importance should maintain or enhance the nature conservation and/or geological importance of the designation. Where this is not the case and the need for the development outweighs the conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development which avoids nature conservation impacts, and compensation measures designed to ensure that there is no reduction in the overall nature conservation value of the area or feature.”

- 3.8 Policy KP16 states, in brief: “Cardiff’s distinctive natural heritage provides a network of green infrastructure which will be protected, enhanced and managed to ensure the integrity and connectivity of this multi-functional green resource is maintained. Protection and conservation of natural heritage network needs to be reconciled with the benefits of development. Proposed development should therefore demonstrate how green infrastructure has been considered and integrated into the proposals. If development results in overall loss of green infrastructure, appropriate compensation will be required.”
- 3.9 No part of the Study Area is covered by any statutory designations. However, there are four Internationally important designations within 10km of the Study Area, three Nationally important designation within 2km of the Study Area and one County importance designation within 2km of the Study Area. These sites are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 1**.

Table EDP 3.1: Statutory Designations Within the Study Area’s Potential Zone of Influence

Designation	Approx. distance from Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 10km of the Site)		
Seven Estuary Ramsar site	Overlaps with a 0.07ha area of the Study Area; 450m east of Application Site.	The Severn Estuary is an important site for migratory birds, with an internationally important population of Bewick’s swan (<i>Cygnus columbianus bewickii</i>) being supported. The estuary is also important for migratory fish, with species such as the rare and endangered allis shad (<i>Alosa alosa</i>), salmon (<i>Salmo salar</i>), sea trout (<i>Salmo trutta</i>), sea lamprey (<i>Petromyzon marinus</i>), river lamprey (<i>Lampetra fluviatilis</i>), twaite shad (<i>Alosa fallax</i>) and eel (<i>Anguilla anguilla</i>), all recorded to be using the estuary.

Designation	Approx. distance from Site	Interest Feature(s)
Seven Estuary SAC	Overlaps with a 0.07ha area of the Study Area; 450m east of Application Site. 9.16km north-west of Application Site.	The Severn Estuary is important for its unique tidal range and diverse assemblage of habitats supported, including Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), intertidal mudflats and sandflats not covered by seawater at low tide, estuaries, reefs and sandbanks which are slightly covered by sea water all the time. The estuary also supports uncommon species such as twaite shad, river lamprey and sea lamprey.
Seven Estuary SPA	Overlaps with a 0.07ha area of the Study Area; 450m east of Application Site.	The Severn Estuary regularly supports over 20,000 wintering waterfowl. Internationally important populations of five species of waterfowl are regularly supported, including European whitefronted 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>). In addition, the islands of Flat Holm and Steep Holm support a nationally important breeding population of lesser black-backed gulls (<i>Larus fuscus</i>).
Cardiff Beech Woods (SAC)	8.83km north-west	An area of semi-natural broadleaved woodland dominated by beech (<i>Fagus sylvatica</i>). This SAC comprises one of the largest concentrations of <i>Asperulo-Fagetum</i> beech forests in Wales. Notable ground flora includes ramsons (<i>Allium ursinum</i>), sanicle (<i>Sanicula europaea</i>), bird's-nest orchid (<i>Neottia nidus-avis</i>) and yellow bird's-nest (<i>Hypopitys monotropa</i>).
Nationally Important Statutory Designated Sites (within 1km of the Study Area)		
Seven Estuary SSSI	Overlaps with a 0.07ha area of the Study Area; 450m east of Application Site.	The Severn Estuary is designated for the intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh, as well as the vegetative communities, migratory fish and wintering and wading birds that it supports.

Designation	Approx. distance from Site	Interest Feature(s)
Gwent Levels – Rumney and Peterstone SSSI	770m north-east of Study Area and 1.29km north-east of Application Site	The Rumney and Peterstone area supports a number of important plant species including the nationally rare brackish water-crowfoot (<i>Ranunculus baudotii</i>) and several regional rarities. The northern section of this SSSI is a stronghold on the Gwent Levels for the flowering rush (<i>Butomus umbellatus</i>). Also supports a high invertebrate interest.
Rumney Quarry SSSI	1.22km north of Study Area and 1.76km of the Application Site	Rumney Quarry is a small disused quarry situated in a residential area of east Cardiff designated for its geological interests. It is a very important site for the interpretation of the disposition of land and sea in mid-Silurian times. This site provides the best exposure of the Silurian Rumney Grit, which is considered to belong to the oldest part of the Homerian Stage of the Wenlock Series. The coarse clastic facies displayed here, together with the fauna which is dominated by bivalves and gastropods (and which also contains non-vascular plant remains), indicate a near-shore situation.
Howardian Local Nature Reserve	1.3km north of the Study Area and 1.64km north of the Application Site.	A 32 acre site situated in the lower Rhymney valley a mile and a half from Cardiff City centre, this LNR encompasses areas of woodland, wildflower meadow, ponds and reedbeds.
Rhymney River Section SSSI	1.38km north of the Study Area and 1.89km north of the Application Site.	Rhymney River Section is of special interest for its geology. Located along a short tidal stretch of the Rhymney River estuary in Cardiff, it includes 300m of the river and its steep bank. The most accessible and visible rocks are located at river level and are most completely exposed at low tide.

Non-statutory Designations

- 3.10 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 Cardiff, 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) 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 Cardiff Local Development Plan, specifically Policy KP16 (Green Infrastructure 16) and EN5 (Designated Sites).
- 3.11 The Application Site and part of the Study Area (namely the eastern half) overlaps with the boundaries of Pengam Moors SINC. There are, additionally, 8 other SINCs located within 2km of the Study Area, as summarised in **Table EDP 3.2** and shown on **Plan EDP 2**.

Table EDP 3.2: Non-statutory Designations within 2km of the Study Area

Designation	Approx. distance from Site	Interest Feature(s)
Pengam Moors SINC	Overlaps with both the Study Area and Application Site	The SINC is made up of grassland habitats surrounded by scrub and areas of bare ground of former industrial use. The site is important for many rare maritime plants including sea clover (<i>Trifolium squamosum</i>), brackish water crowfoot (<i>Ranunculus baudotii</i>) and water whorl-grass (<i>Catabrosa aquatica</i>) and for roosting and breeding rare waterfowl and wintering birds of prey. It supports priority habitats including lowland calcareous meadow, lowland meadow and open mosaic habitat on previously developed land.
River Rhymney SINC	26m north of Study Area and	The Rhymney River is designated for its importance for migratory fish, otter (<i>Lutra lutra</i>), wildfowl and bankside vegetation and is a wildlife corridor for bats, dormouse (<i>Muscardinus avellanarius</i>) and grass snake (<i>Natrix natrix helvetica</i>). Eel (<i>Anguilla Anguilla</i>) and trout have been recorded in the River Rhymney.
Lamby Salt Marsh SINC	118m north east of Study Area and	An area of saltmarsh located on the eastern banks Rhymney River and fringing the Severn Estuary.
Lamby North SINC	544m north of Study Area	An area of inland saltmarsh located on the eastern bank of the Rhymney River.

Designation	Approx. distance from Site	Interest Feature(s)
Rhymney River Grassland East SINC	753m north of Study Area and	An area of neutral semi-improved grassland with some calcareous semi-improved grassland located on the western bank of the Rhymney River.
Roath Brook SINC	935m north-west of Study Area and	Designated as a small watercourse which is comparatively unmodified, supports good aquatic, emergent or bankside plant communities, and where the water is not grossly polluted by long-term sources. Eel trout and kingfishers (<i>Alcedo atthis</i>) have all been recorded in and along the Roath Brook SINC.
Tidal Sidings SINC	991m south-west of Study Area and	The site is on the former sidings of the abandoned Roath Branch railway line. It supports calcareous grassland with locally rare species including meadow cranes-bill (<i>Geranium pratense</i>) and bee orchid (<i>Orphrys apifera</i>).
Lamby Way SINC	1.03km north	An area of damp semi-improved neutral grassland which supports grass snake and Cetti's warbler (<i>Cettia cetti</i>).
Ocean Park South SINC	1.19km south-west of Study Area	The site is designated for the immature calcareous grassland and scrub habitats supporting rare lichens, birds and plants, including autumn lady's tresses (<i>Spiranthes spiralis</i>), bee orchid, small thyme-leaved sandwort (<i>Arenaria serpyllifolia</i>), skylark (<i>Alauda arvensis</i>) and linnets (<i>Carduelis cannabina</i>).

Designation	Approx. distance from Site	Interest Feature(s)
Cardiff Heliport Fields SINC	1.26km south of Study Area and	An area that prior to 1960s formed part of the Roath Storage sidings together with area of rough maritime grassland on made up land. The site has developed into neutral/calcareous grassland with species such as carnation sedge (<i>Carex panicea</i>), cat's ear (<i>Hypochaeris radicata</i>), common knapweed (<i>Centaurea nigra</i>), grass vetchling (<i>Lathyrus nissolia</i>), lesser stitchwort (<i>Stellaria graminea</i>), meadow vetchling (<i>Lathyrus pratensis</i>), oxeye daisy (<i>Leucanthemum vulgare</i>), red clover (<i>Trifolium pratense</i>) and tufted vetch (<i>Vicia cracca</i>).

HABITATS

3.12 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 are listed 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; and in so doing, deliver net benefits to biodiversity in accordance with Chapter 6 of PPW through adoption of a stepwise approach by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort, compensated for. Enhancement must be secured by delivering a biodiversity benefit primarily on a site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact;
- PPW 12 includes a presumption against development which results in significant harm to biodiversity and ecosystem functioning, or results in the loss of irreplaceable habitat¹³. PPW 12 also sets out how planning authorities should fulfil their 'Biodiversity and Resilience of Ecosystems Duty' as required by the Environment (Wales) Act 2016. Pertinent to this, Chapter 6 of PPW 12 also afford further consideration to the

¹³ Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Examples include ancient woodland and veteran trees, ancient hedgerows, wet woodlands, sand dunes, peatland, species rich grassland, long undisturbed soils, blanket bog, salt marsh and lowland fen..

protection of trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function;

- Chapter 6 of PPW 12 places further emphasis on adopting a proactive approach to integration of green infrastructure within development plans/proposals, adopting building with nature standards and in so doing, supporting the delivery of ecosystem services and net benefits to biodiversity across site boundaries; and
- The importance of protecting habitats, and networks of habitats, is reflected in the Cardiff Local Development Plan including the following Policies:
 - KP16 Green Infrastructure;
 - EN4 Natural River Corridors: *“The Natural Heritage, character and other key features of Cardiff’s river corridors will be protected, promoted and enhanced, together with facilitating sustainable access and recreation”*;
 - EN6 Ecological Networks and Features of Importance for Biodiversity: *“Development will only be permitted if it does not cause unacceptable harm to: i. Landscape features of importance for wild flora and fauna, including wildlife corridors and ‘stepping stones’ which enable the dispersal and functioning of protected and priority species; ii. Networks of importance for landscape or nature conservation. Particular priority will be given to the protection, enlargement, connectivity and management of the overall nature of semi natural habitats. Where this is not the case and the need for the development outweighs the nature conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development and compensatory provision will be made of comparable ecological value to that lost as a result of the development”*;
 - EN7 Priority Habitats and Species – *“Development proposals that would have a significant adverse effect on the continued viability of habitats and species which are legally protected or which are identified as priorities in the UK or Local Biodiversity Action Plan will only be permitted where: i. The need for development outweighs the nature conservation importance of the site; ii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and iii. Effective mitigation measures are provided by the developer. Where harm is unavoidable it should be minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not possible compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species should be provided”*; and
 - EN8 Trees Woodland and Hedgerows: *“Development will not be permitted that would cause unacceptable harm to trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage value, or that contribute significantly to mitigating the effects of climate change”*.

- 3.13 The distribution of different habitat types within the Study Area is illustrated on **Plan EDP 3**. The habitats are further described below alongside illustrative photographs.

Land East of Rover Way

- 3.14 The Study Area encompasses circa 1.8ha of land immediately east of Rover Way. The majority of this area is occupied by the existing Gypsy and Traveller site and is thus characterised by hardstanding, residential dwellings and caravan plots. A horse grazed grassland field lies directly north of the Gypsy and Traveller site, directly abutting the Severn Estuary. At the time of survey there was no access to this plot of land but vegetation abutting the boundaries of the Gypsy and Traveller Site and extending along the edge of Rover Way appears to be dominated by bramble (*Rubus fruticosus* agg.) scrub with hawthorn (*Crataegus monogyna*) and dog-rose (*Rosa canina*) saplings. Tall ruderal species are also present amongst the scrub vegetation with common nettle (*Urtica dioeca*), willowherb (*Epilobium* sp.), creeping thistle (*Cirsium arvense*) and hedge bindweed (*Calystegia sepium*) noted. The grassland here is characterised by a heavily grazed and trampled sward with extensive fly tipping and much bare ground. Construction works associated with reinforcement of the sea wall is ongoing here and further north along the boundary with the Severn Estuary. Such habitats are considered to be of limited ecological importance overall, being species-poor and heavily impacted by grazing and fly tipping. Nevertheless, this area of land directly abuts the Severn Estuary such that the presence of notable maritime plant communities establishing within or along the edge of the Study Area cannot be entirely ruled out. Indeed, a Preliminary Ecological Appraisal undertaken by JBA Consulting¹⁴ to inform a planning application (planning reference: 21/02138/MJR) for the coastal flood defence works along the boundary between Rover Way and the River Rhymney and Severn Estuary identified salt marsh communities overlapping with the Study Area here.

Pengam Moors SINC

Poor Semi-Improved Grassland

- 3.15 Despite grassland communities being a feature of Pengam Moors SINC, communities recorded during the Extended Phase I habitat survey (fields **F1-F3**) were more indicative of a poor-semi-improved grassland sward, highlighting the degradation that has occurred as a result of heavy grazing and poaching by horses on a continuous basis. Indeed, horse manure was scattered throughout the survey area within Pengam Moors SINC. The grassland sward here is grazed very short to the ground and dominated by false oat-grass (*Arrhenatherum elatius*), with abundant creeping buttercup (*Ranunculus repens*). Daisy (*Bellis perennis*), teasel (*Dipsacus fullonum*), fescue (*Festuca* sp.), bristly oxtongue (*Helminthotheca echioides*) and ribwort plantain (*Plantago lanceolata*) also occur occasionally whilst sedge (*Carex* sp.) and red clover (*Trifolium pratense*) were recorded rarely. The grassland is heavily trampled and rutted with bare ground accounting for a large proportion of the grassland communities here, whilst bramble scrub is encroaching across the field to a significant extent.

¹⁴ JBA Consulting (2017). Cardiff Coastal Risk Management Programme Outline Business Case Preliminary Ecological Appraisal.



Image EDP 3.1: Northern boundary of field **F1**, north of Tesco Extra superstore.



Image EDP 3.2: Looking south from the northern boundary of field **F3**.

- 3.16 The survey was undertaken during a period of persistent rain such that much of the grassland within field **F3** in particular was inundated, with large pools of surface water forming across localised areas of the SINC, predominantly across its northern half. Moss species are abundant across such waterlogged areas whilst localised patches of hard rush (*Junus inflexus*) were recorded where the ground is more naturally boggy. Common fleabane (*Pulicaria dysenterica*) is frequent-abundant across such areas. Vegetation characteristic of aquatic and marshy habitats are largely lacking although water forget me-not (*Myosotis scorpioides*) and water starwort (*Callitriche* sp.) were present in localised patches. Otherwise, ground conditions were firm rather than boggy. Likely, intensive livestock poaching of Pengam Moors SINC has heavily compacted the ground, impeding drainage and further accounting for the poor botanical diversity recorded.



Image EDP 3.3: Looking north-west across field **F3** towards Tesco Extra superstore with surface water flooding visible.



Image EDP 3.4: Looking west across field **F3** from the eastern boundary in the south with less surface water flooding here.

Dense and Scattered Scrub

- 3.17 The margins of fields **F1-F3** within Pengam Moors SINC are characterised by thick bands of dense bramble scrub which is encroaching across grassland communities, particularly from the southern boundary with Seawall Road and from the northern and eastern boundary with Rover Way. Scrub encroachment is particularly extensive across the largest field **F3**. Within the northern half of field **F1**, much of the scrub which had established within the centre of the fields appears to have been previously cut to ground level.

- 3.18 Discrete patches of dense bramble scrub are otherwise scattered across field **F1** whilst aggregations of scattered goat willow (*Salix caprea*) scrub were frequently recorded across the central third of field **F1** within those areas subject to surface water flooding.



Image EDP 3.5: Area of low lysing bramble scrub across the northernmost third of field **F3**.



Image EDP 3.6: Scattered willow scrub within flooded areas across field **F3**.

- 3.19 Dense scrub communities are relatively more diverse along field boundaries with Tesco Extra Superstore and disused access tracks further south, with discrete areas of mixed scrub planting also present along Rover Way. In addition to bramble, landscape planting along boundary fence lines include a mix of dogwood (*Cornus sanguinea*), hawthorn, butterfly bush (*Buddleja davidii*), willow (*Salix* sp.), European gorse (*Ulex europaeus*), blackthorn (*Prunus spinosa*), wild cherry (*Prunus avium*) and silver birch (*Betula pendula*). Dense aggregations of Japanese knotweed (*Fallopia japonica*), an invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act (1981, as amended), is also present, predominantly recorded along the eastern boundary of Rover Way and within dense scrub across the southernmost extents of field **F3**.



Image EDP 3.7: Mixed scrub with a group of immature/semi-mature trees along northern boundary of field **F1**.



Image EDP 3.8: Mixed scrub delineating margins of a disused access road to the west of field **F3** in the south.

- 3.20 A mixed scrub community delineates the margins of a disused access road from Seawall Road. Here, a line of semi-mature/mature trees was recorded with an understorey characterised by non-native vegetation including laurestinus (*Viburnum tinus*), Darwin's barberry (*Berberis darwinii*) and butterfly bush, alongside native hawthorn, alder (*Alnus glutinosa*), gorse, cherry and oak (*Quercus* sp.) saplings.
- 3.21 Bramble and mixed scrub communities are considered to be of inherently low ecological importance, lacking in botanical and structural diversity with presence of non-native species noted throughout the Study Area. Nevertheless, such habitats provide a foraging and nesting resource for birds in particular, whilst contributing to a mosaic of habitats within the boundaries of Pengam Moors SINC.

Line of trees

- 3.22 The disused access track entering Pengam Moors SINC from Seawall Road is characterised by a line of semi-mature trees, typically dominated by pedunculate oak (*Quercus robur*) although a line of cherry trees were also recorded further north, whilst a group of scattered ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) and silver birch was also recorded along the northern boundary of field **F1**. In addition to those mixed scrub communities previously described, a ground flora community was largely dominated by common ivy (*Hedera helix*).
- 3.23 Dominated by native species with a shrub understorey, semi-mature tree lines provide suitable habitat for protected and notable species whilst also providing a linear feature for the dispersal of wildlife across the Study Area and wider landscape.

Wet and Dry ditches

- 3.24 Part of the northern and eastern boundary of Pengam Moors SINC with Rover Way is characterised by a vegetated earth bank beyond which is a wet ditch (**WD1**), typically 2.5m wide which flows approximately north to south. Water depth is variable with the upper sections of this ditch dry but holding more water further south. A channel is largely obscured by bankside scrub dominated by bramble with occasional shrubby species. Fly tipping within the ditch was recorded at several locations along its length, impeding flow.



Image EDP 3.9: **WD1** along eastern boundary of field **F3** with extensive fly tipping in channel.

- 3.25 A number of shallow, wet ditches were also recorded centrally within field **F3**, likely excavated in previous years to assist with flood management of the Site. Excavated ditches are typically 1m wide with 30cm high banks sloping out at an approximately 30° angle. Water depth is again variable although on average 0.1m deep. In-channel vegetation is dominated by terrestrial grasses and creeping buttercup, indicating onsite ditches are likely dry for the majority of the year. Localised patches of aquatic species were, however, recorded within **WD2** and **WD3**, with sections of these ditches excavated to a greater depth and likely holding some water either permanently or for a greater proportion of the year. Here, water starwort was most commonly recorded, whilst water forget-me-not and water bistort (*Persicaria amphibia*) are present occasionally. Similarly, a wet ditch (**WD4**) with some limited vegetation in its channel was recorded along the western boundary of field **F3**, although its northernmost extent is dry.
- 3.26 Such habitats in the context of the Study Area are considered to be of limited ecological importance, holding limited water and for the most part devoid of vegetation. Those sections which are more permanently wetted and support some vegetation are, however, more likely to provide suitable ephemeral habitat for a local amphibian population, particularly where contiguous with areas of inundated grassland.



Image EDP 3.10: Ephemeral wet ditch across field **F3**.



Image EDP 3.11: WD3 with some localised aquatic species present.

Other Habitats

- 3.27 A large area of bare ground is present across the southern extent of field **F3** where a makeshift paddock has been constructed for grazing horses, interspersed among the dense bramble scrub which occurs here. Several makeshift structures were also recorded within this area, used to stable grazing horses and are typically constructed from irregular pieces of wood, metal sheeting and pallets. Several makeshift fences have also been erected across fields **F1-F3** to enclose grazing horses. Such habitats are of negligible ecological importance.



Image EDP 3.12: Makeshift horse stable located within southern half of field **F3**.



Image EDP 3.13: Bare ground in the south eastern corner of field **F3** where horses are stabled.

The Application Site

- 3.28 The Application Site encompasses circa 5ha of land accessed via Seawall Road along its southern boundary and overlapping with the boundaries of Pengam Moors SINC. Historically, the majority of the Application Site comprised developed land and in circa 2006 was characterised by bare ground and hardstanding. Following cessation of industrial activities post-2010, vegetation has since recolonised this parcel of land.

Mixed Plantation Woodland

- 3.29 The western and northern boundaries of the Application Site with the adjacent Willows High school and residential housing respectively is defined by broadleaved plantation woodland with semi-mature silver birch, ash and oak recorded here, in addition to the occasional pine (*Pinus* sp.). Hawthorn and dogwood are present within the understorey. A ground flora community, particular along the northern boundary is sparse or otherwise dominated by common ivy.



Image EDP 3.14: Plantation woodland with mix scrub edge along the western boundary of the Application Site.

Dense and Scattered Scrub

- 3.30 The margins of plantation woodland with adjacent marshy grassland are defined by a band of dense scrub dominated by bramble but with dogwood locally frequent and butterfly bush, ash and willow saplings also recorded here and scattered across the adjacent grassland.

Marshy grassland

- 3.31 The northwestern corner of the Application Site encompasses a marshy grassland field (**F4**) grazed by horses. False oat-grass is dominant whilst soft rush is locally abundant. Common

fleabane. creeping buttercup and creeping thistle were also recorded within the otherwise species-poor sward present, with bramble scrub, gorse and tree saplings encroaching from the field margins.

- 3.32 Marshy grassland communities recorded onsite are considered to be of limited ecological value, given their poor floristic diversity and relatively limited extent, subject to horse grazing and poaching. Nevertheless, given the sub-optimal time of year at which an Extended Phase I habitat survey was completed and given its location within the boundaries of Pengam Moors SINC, further survey during the optimal season for grassland habitats is recommended.



Image EDP 3.15: Marshy grassland across field **F4** within the Application Site.

Ephemeral/Short perennial

- 3.33 A circa 1.61ha area of the Application Site is characterised by ephemeral/short perennial communities which have established over former bare ground characterised by a stony substrate. Such communities appear heavily grazed both by horses and rabbit and characterised by a very short sward (0.05cm) with patches of bare ground visible amongst the vegetation. Moss species are abundant across this habitat with creeping buttercup, white clover (*Trifolium repens*) and daisy also abundant. Bird's-foot-trefoil (*Lotus corniculatus*), dove's foot cranes-bill (*Geranium molle*), field speedwell (*Veronica persica*) and bristly oxtongue are also present.

- 3.34 Ephemeral/short perennial communities appear predominantly species-poor with much bare ground and a dominance by single moss species, although some localised patches exhibit more diversity. Further survey during the optimal season is recommended.



Image EDP 3.16: Ephemeral/short perennial vegetation establishing over stony substrate



Image EDP 3.17: Ephemeral/short perennial vegetation established over stony substrate although bare ground remains dominant here.

Scattered Scrub

- 3.35 Scattered shrubs are otherwise present across ephemeral/short perennial communities, with willow and butterfly bush frequently recorded in addition to oak and silver birch saplings. Gorse and occasionally broom (*Cytisus scoparius*) is present along the boundaries of this land parcel with the adjacent access track.

Poor Semi-improved Grassland

- 3.36 A small area of poor semi-improved grassland was recorded along the eastern edge of field **F5** which has otherwise succumbed to significant scrub colonisation. False oat-grass is dominant here with hard rush present occasionally. Knapweed (*Centaurea nigra*) is frequent within the sward with wild carrot recorded occasionally (*Daucus carota*). Although some evidence of horse grazing was recorded, this appears to occur to a lesser extent compared to the wider Pengam Moors SINC with tussocks developing.
- 3.37 Species-poor grassland communities are likely to be of no more than Site level importance given their poor diversity and limited extent.

Dense Scrub

- 3.38 Field **F5** comprising the Application Site is otherwise dominated by a species-poor scrub community dominated by gorse with bramble and butterfly bush also present. Such habitats are considered to be of inherently low ecological importance, given its poor botanical diversity and low distinctiveness, albeit with potential to support protected and notable species.

Hardstanding

- 3.39 A small square area of hardstanding is present along the southern boundary of the Application Site with a disused access road extending northwards through this land parcel and curling along its northern and eastern boundary. This area is currently used as a paddock for horses. Such habitats are of negligible ecological importance.



Image EDP 3.18: Hardstanding used as a paddock for grazing horses.

Tremorfa Park and Surrounds

Broadleaved Plantation Woodland

- 3.40 Between Tremorfa Park and Pengam Moors SINC is a triangular parcel of land delineated by public footpaths and whose boundaries of which are defined by broadleaved plantation woodland (**W1** and **W2**). The canopy is represented by semi-mature and mature sycamore, ash and wild cherry with bramble scrub, hawthorn and butterfly bush, blackthorn and dogwood in the understorey, particularly in respect of woodland **W1** which appears more diverse and encompassing a larger area than **W2**. Semi-mature ash was dominant within the canopy of woodland **W2**. Common ivy dominates the ground flora community here.
- 3.41 A circa 0.14ha area of planted trees (**W3**) is also present adjacent to the southern boundary of Tremorfa park adjacent to a grassed over amphitheatre with mature broadleaved and conifer tree standards recorded here and scattered across adjacent grassland.
- 3.42 Groups of planted trees (**W5** and **W6**) are also present between Ffordd Pegam and Rover Way in the north of the Study Area, with cherry, willow, alder, ash, oak present within the canopy of **W5**. Bramble, butterfly bush, holly (*Ilex aquilinum*) and laurel is present within the understorey. A ground flora community is species-poor and dominated by common ivy with some poaching by horses evident. **W6** is, in contrast, dominated by alder with ornamental bamboo and Japanese knotweed recorded within the understorey.

- 3.43 Such habitats provide suitable cover for a range of protected species, including nesting habitat for birds and foraging habitat for bats and badger and considered to be of comparatively higher ecological value than surrounding scrub and amenity grassland habitats.



Image EDP 3.19: Grassed over amphitheatre with tree planting to both the east and west.

Poor Semi-improved grassland

- 3.44 Field **F6** lying between residential housing and field **F3** is characterised by a poor semi-improved grassland sward. For the most part, the grassland here is tall and tussocky (circa 0.3-0.4m high) although an informal circular footpath has been cut around the perimeter of this field and is used by dog walkers. Dense bramble scrub occupies the centre of this field. A grassland sward is dominated by false oat-grass and cock's-foot (*Dactylis glomerata*) with tufted hair grass (*Deschampsia cespitosa*), hard rush and soft rush also occurring occasionally. Knapweed (*Centaurea nigra*) is frequent across this field whilst common vetch (*Vicia sativa*), creeping thistle (*Cirsium arvense*), silverweed (*Potentilla anserina*), teasel (*Dipsacus fullonum*), creeping buttercup and white clover (*Trifolium repens*) also occur.
- 3.45 Grassland here is contiguous with a linear strip of vegetation dominated by moss communities which has colonised the edge of this habitat with adjacent hardstanding. Here, Yorkshire fog (*Holcus lunatus*), hogweed (*Heracleum sphondylium*), annual meadow grass (*Poa annua*) and black medick (*Medicago lupulina*) were also recorded.
- 3.46 Field **F7** is similarly characterised by a poor semi-improved grassland sward dominated by cock's-foot and Yorkshire fog with fescue also present. Herb species recorded include

common knapweed, common vetch, meadow buttercup (*Ranunculus acris*), creeping buttercup and creeping cinquefoil (*Potentilla reptans*) with localised patches of rosebay willowherb (*Chamerion angustifolium*) and broadleaved dock (*Rumex obtusifolius*). Planted saplings are scattered throughout this grassland including oak, alder and goat willow specimens.

- 3.47 Field **F8** is located between residential housing and Rover Way along the northern boundary of the Study area. There was no access to this field although grassland communities appeared comparable to fields **F1-F3**, subject to horse grazing, with bramble scrub encroaching from the field margins.
- 3.48 Grasslands habitat across field **F6** and **F7** are comparatively more species-rich than those communities identified across the remainder of the Study Area with an absence of grazing pressures here.



Image EDP 3.20: Field **F7** looking north-west.

Amenity Grassland

- 3.49 Tremorfa Park in the north west of the Study Area encompasses a large playing field and play areas with associated areas of hardstanding and soft play substrates. Subject to regular cutting the grassland sward here is uniformly circa 0.1m high and species-poor with cock's-foot, false oat-grass, perennial rye-grass (*Lolium perenne*), creeping buttercup, daisy and dandelion recorded within the sward.



Image EDP 3.21: Click or tap here to enter text.

- 3.1 A linear strip of amenity grassland is also present along the edge of Ffordd Pengam in the far north of the Study Area, characterised by a short sward (circa 3-5cm high) and poached/grazed by horses which are present here. Perennial rye-grass is dominant with daisy, ribwort plantain and common ragwort (*Jacobaea vulgaris*). Several flowering bulb species are also present including *Crocus* sp. and snowdrop (*Galanthus* sp.). This habitat is contiguous with a strip or more unmanaged grassland directly adjacent to Rover Way which is characterised of a specie-poor semi-improved grassland sward with perennial rye-grass, annual meadow grass and common bent (*Agrostis capillaris*) present, together with tall ruderal species including common nettle.
- 3.2 Amenity grassland is considered to be of inherently low ecological value, given its poor floristic diversity and subject management for amenity use although pockets of more diverse vegetation cover may occur along boundaries with adjacent habitats including hedgerows and mature tree lines.

Scattered Trees/Lines of Trees

- 3.3 Public footpaths located centrally within the Study Area are delineated by a line of semi mature/mature trees typically dominated by a single species within any single line including beech (*Fagus sylvatica*), lime (*Tilia x europaea*) or cherry. A line of cherry trees and then ash is also present along the edge of Ffordd Pengam In the far north of the Study Area.
- 3.4 Dense and scattered scrub was frequently recorded within the understory along these boundaries including dogwood, willow, elm (*Ulmus* sp.) and/or non-native/ornamental varieties.



Image EDP 3.22: Semi-mature tree lines along public footpaths.

- 3.5 The grounds of Tremorfa Park, particularly along its eastern boundary and across the northern half encompasses linear belts of scattered trees with poplar frequently recorded alongside lime, ash and silver birch, and shrubby specimens including blackthorn, willow and dogwood.
- 3.6 The grounds of Tremorfa Park, particularly along its eastern boundary and across the northern half encompasses linear belts of scattered trees with poplar (*Populus* sp.) frequently recorded alongside common lime, ash and silver birch, with shrubby specimens including blackthorn, willow and dogwood.
- 3.7 Such features provide suitable habitat for nesting birds and roosting bats whilst also providing a linear, vegetated feature for the dispersal of wildlife across the Study Area and are considered to be of Site-Local level importance.

Native Hedgerows

- 3.8 The western and part of the northern boundaries of Tremorfa Park are defined by native hedgerows forming the curtilage of adjacent residential housing. The western boundary hedgerows (**H1** and **H2**) comprise a line of outgrown shrubs and semi-mature trees with hawthorn, elder (*Sambruca nigra*), ash and sycamore recorded here. A ground flora community is dominated by common ivy although cleaver (*Galium aparine*) was also present in some abundance with Lords-and Ladies (*Arum maculatum*) recorded rarely.



Image EDP 3.23: Hedgerow **H1** along western boundary of Tremorfa Park



Image EDP 3.24: Hedgerow **H4**.

- 3.9 **H3** in contrast is a shrubby hedgerow albeit fragmented by fence lines. Hawthorn is dominant here with immature ash and sycamore occurring rarely. Hedgerow **H4** is a recently planted, managed hedgerow defining the boundary between the playing fields and a small area of parkland trees, dominated by beech.
- 3.10 Native hedgerows provide suitable habitat for protected and notable species whilst also providing a linear feature for the dispersal of wildlife across the Study Area and wider landscape. A habitat of principal importance for Wales, such habitats are typically considered to be of Local level importance, albeit of varying condition here and defining the boundaries of residential curtilages here.

Willows High School

- 3.11 There was no access to the grounds of Willows High School during the Extended Phase I habitat survey such that an assessment of habitats present/likely present was based on aerial photography combined with a survey of those habitats visible from adjacent boundaries.
- 3.12 Central areas of this land parcel are occupied by the main school buildings with associated levels of hardstanding of negligible ecological importance, albeit the buildings themselves may have potential value for roosting bats and nesting birds.
- 3.13 Semi-natural habitat within the school grounds is dominated by amenity grassland associated with playing fields/areas and soft landscaping to the frontage of the school entrance, appearing regularly mown with some bulbs visible. An avenue of semi-mature/mature trees have been planted along the access road and car parking areas. The eastern boundary with the adjacent Application Site is defined by mixed plantation

woodland previously describes above which also extends along part of the school's southern boundary with Seawall Road, becoming a scattered tree line. A stand of Japanese Knotweed is present here.



Image EDP 3.25: Scattered tree line with Japanese knotweed in the understorey along southern boundary of Willows High School with Seawall Road.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

- 3.14 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.
- 3.15 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 Cardiff Local Development Plan, Policy EN7 (Priority Habitats and Species).
- 3.16 The likelihood of presence, or confirmed presence, of protected, priority or other notable wildlife species within the Study Area is summarised below with reference to desk study records, and habitat suitability.

Breeding and Wintering Birds

- 3.17 All wild birds, their nests and eggs are protected under the *Wildlife and Countryside Act 1981* (as amended). 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.
- 3.18 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended), 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.
- 3.19 A large number of records of bird species were retrieved during the desk study, including records of Wildlife and Countryside Act 1981 (as amended) Schedule 1 species, priority species, and those species included on the latest Red and Amber lists of Birds of Conservation Concern in Wales (BOCC)¹⁵.
- 3.20 The vast majority of records received relate to those wetland, wildfowl and coastal bird species that would typically inhabit intertidal habitats associated with the Severn Estuary and River Rhymney which could also utilise the Study Area for roosting and foraging given its proximity to such habitats.
- 3.21 Several records were returned for Pengam Moors and Tremorfa Park, located within the Study Area including the following priority and BOCC red listed species: white-fronted goose (*Anser albifrons*), herring gull (*Larus argentatus*), lapwing (*Vanellus vanellus*), ringed plover (*Charadrius hiaticula*), kestrel (*Falco tinnunculus*), short-eared owl (*Asio flammeus*), common gull (*Larus canus*), black-headed gull (*Chroicocephalus ridibundus*), house sparrow (*Passer domesticus*), greenfinch (*Chloris chloris*), lesser black-backed gull (*Larus fuscus*), tree pipit (*Anthus trivialis*), swift (*Apus apus*), starling (*Sturnus vulgaris*), linnet (*Linaria cannabina*), whitethroat (*Curruca communis*).
- 3.22 Amber listed priority species include shelduck (*Tadorna tadorna*), curlew (*Numenius arquata*), curlew sandpiper (*Calidris ferruginea*), snipe (*Gallinago gallinago*), bullfinch (*Pyrrhula pyrrhula*), common gull (*Larus canus*), dunnock (*Prunella modularis*), skylark (*Alauda arvensis*), mistle thrush (*Turdus viscivorus*) and meadow pipit (*Anthus pratensis*).
- 3.23 Records of Schedule 1 species returned include fieldfare (*Turdus pilaris*), red kite (*Milvus milvus*), marsh harrier (*Circus aeruginosus*) hen harrier (*Circus cyaneus*), honey buzzard (*Pernis apivorus*), goshawk (*Astur gentilis*), garganey (*Spatula querquedula*), long-tailed

¹⁵ 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*

duck (*Clangula hyemalis*), goldeneye (*Bucephala clangula*), hoopoe (*Upupa epops*), black-tailed godwit (*Limosa limosa*), Mediterranean gull (*Ichthyaetus melanocephalus*), wood sandpiper (*Tringa glareola*), merlin (*Falco columbarius*), black redstart (*Phoenicurus ochruros*), brambling (*Fringilla montifringilla*), barn owl (*Tyto albus*) redwing (*Turdus iliacus*) and peregrine falcon (*Falco peregrinus*).

- 3.24 The Study Area and land immediately adjacent encompass a relatively diverse range of habitats of value to a breeding bird assemblage including woodland, mature tree lines, dense scrub and grassland, with salt marsh and estuarine communities located immediately adjacent to the east and further north. Despite the relatively large size of the Study Area and field **F3** in particular, such habitats are, however, unlikely to support populations of ground nesting species such as lapwing and skylark, given the paucity of dense scrub which would interrupt sight lines for predators whilst also being subject to regular disturbance by grazing horses.
- 3.25 Grassland habitats are likely to provide a foraging resource for both a breeding and wintering bird assemblage albeit of relatively low quality given extensive grazing and poaching by horses, but provide large areas of potentially sheltered roosting grounds for an overwintering bird assemblage. Of particular pertinence, the Severn Estuary Ramsar site/SAC/SPA is located adjacent to the Study Area such that there is the potential for the Study Area to function as suitable roosting/foraging habitat for qualifying bird species associated with these statutory designations. Pengam Moors SINC, overlapping with the boundaries of the Study Area, is further noted for its populations of roosting and breeding waterfowl and birds of prey. Further survey to assess the importance of a breeding and wintering bird assemblage utilising the Study Area will, therefore, be required to inform a planning application for future development.

Bats

- 3.26 The desk study returned multiple records for bats within the 2-6km search radius around the Study Area. These records relate to at least eleven different species, including brown long eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), lesser horseshoe (*Rhinolophus hipposideros*), greater horseshoe (*Rhinolophus ferrumequinum*), noctule (*Nyctalus noctula*), Natterers' (*Myotis nattereri*), Leisler's (*Nyctalus leisleri*), whiskered (*Myotis mystacinus*), Nathusii pipistrelle (*Pipistrellus nathusii*) and Daubenton's (*Myotis daubentonii*) bats, in addition to unidentified bats and unspecified records of *Pipistrellus* sp. and *Myotis* sp. bats.
- 3.27 Of particular pertinence to the Study Area, a desk study returned a record for a pipistrelle bat found hanging from a ceiling in Willows High School, thought to support a bat roost. This is in addition to multiple records of roosting common pipistrelle and soprano pipistrelle bats within 2-6km of the Study Area, the closest record being for a common pipistrelle roost circa 1.3km north-west of the Study Area.
- 3.28 Other records include roosts for brown long-eared, Nathusius pipistrelle, whiskered, whiskered/Brandt's and noctule bats including: a noctule maternity roost circa 7km south-west of the Study Area; and an unidentified bat roost of 20 individuals circa 700m north.

- 3.29 With respect to records of Annex II bat species within 6km of the Study Area, a desk study returned four records for roosts of lesser horseshoe bat only, the closest of which is for a possible roost 720m north of the Study Area.
- 3.30 Semi-mature and mature trees present within/adjacent to the Study Area may provide suitable opportunities for a roosting bat assemblage. Indeed, an Extended Phase 1 habitat survey identified a number of trees with potential roosting features that will require further survey to fully assess their potential to support a bat roost.
- 3.31 Several makeshift structures were recorded within the south east corner of field **F3**, used to stable horses. These are, however, considered to be of negligible roosting potential given the absence of suitable cavities and shelter from prevailing weather conditions. Buildings associated with Willows High School are, however, likely to be of some suitability to support roosting bats, with a desk study record of a roost located here.
- 3.32 With respect to a foraging and commuting bat assemblage, woodland, tree lines and boundary scrub provide suitable linear features for commuting bats and enhance the Study Area's connectivity to the wider landscape. Grassland habitat, in addition to woodland, and dense scrub, also provides additional foraging opportunities, although less so for those homogenous and species-poor grassland fields which are less likely to support a diverse invertebrate assemblage.
- 3.33 The Study Area is considered to be of at least Local importance to bats within the wider landscape. In consideration of the suitability of the Study Area for foraging/commuting bats, further survey will be required to assess the importance of the bat assemblage in relation to development proposals.

Badger

- 3.34 A desk study returned nine records of badger within 2km of the Study Area, the closest being for a carcass located off Rover Way circa 340m north of the Study Area, with field signs for this species also recorded across land circa 370m south.
- 3.35 No evidence of badger nor their setts were recorded during the Extended Phase I habitat survey. Nevertheless, the Study Area encompasses a diversity of habitats offering suitable opportunities for sett building, foraging and dispersal opportunities. Given the widespread and common distribution of this species, presence of badger is assumed.

Dormouse

- 3.36 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 *Wildlife and Countryside Act 1981* (as amended) as summarised above in respect of bats. This species is also listed as a priority species.
- 3.37 A desk study returned circa 35 records of dormouse. The majority of these records are associated with Howardian Local Nature Reserve located circa 1.3km north of the Study Area, with several of these records associated with woodland habitat around Parc Tredelech Lake and its adjacent railway line, circa 1.1km north-east of the Study Area.

3.38 The Study Area is however isolated from these populations by existing development and main roads, as well as the River Rhymney which flows west to east to the north of the Study Area. Such features are considered a significant barrier to dispersal of dormouse.

3.39 Dense bramble and mixed scrub, in addition to plantation woodland within the Study Area, provides a foraging resource for dormouse and opportunities for breeding. The suitability of semi-mature/mature tree line boundaries and dense bramble scrub for hibernation is likely to be limited however given the absence of a diverse ground flora community to provide suitable cover. Connectivity within the Study Area at ground and/or canopy level is, however, variable and fragmented by areas of hardstanding, public footpaths, adjacent development and/or grassland. The Study Area is, furthermore, isolated from suitable habitat and known dormouse records within the wider landscape by the River Rhymney to the north, the Severn Estuary to the east and existing residential development and main roads including Rover Way and Seawall Road. Accordingly, the presence of a dormouse population onsite is considered unlikely.

Otter and Water Vole

3.40 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 *Wildlife and Countryside Act 1981* (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.41 Water vole (*Arvicola amphibicus*) and their burrows receive protection under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). 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.

3.42 Water vole is also listed as a priority species.

3.43 A desk study returned 33 records for otter, the closest located within circa 10m of the northern boundary of the Study Area on the opposite side of Rover Way. Records of otter within 2km of the Study Area are otherwise associated with the River Rhymney north of the Study Area, and River Taff and Dock Feeder, Atlantic Wharf and Cardiff Bay located 2km or more from the Study Area. A desk study also returned four records of water vole within 2km of the Site. Of these, three records are dated from the 1970s with only one record being relatively recent (2009) and associated with a reed circa 1.1km northeast of the Study Area, beyond the River Rhymney.

3.44 The ditch network within the Study Area is considered unsuitable for otter and water vole holding limited/no water and largely devoid of aquatic plant and fish communities that would be of value as a foraging resource to water vole and otter respectively.

3.45 Given the relatively widespread presence of otter within the wider landscape however, such features along with adjacent scrub and/or woodland habitat, have the potential to facilitate the dispersal of this species across the Study Area whilst also offering opportunistic refuge to lay up and/or breed. The Study Area is, however, contained by main roads and existing development such that the presence of otter here is unlikely, particularly given the availability of optimal habitat associated with the River Rhydney to the north and Severn Estuary to the east.

Great Crested Newt and other Amphibians

3.46 Great crested newt (*Triturus cristatus*) 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 *Wildlife and Countryside Act 1981* (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.47 Other legally protected amphibians are rare and have a very restricted distribution¹⁶, however, common toad (*Bufo bufo*) is a widespread species which is listed as a priority species.

3.48 A desk study returned a single historical record for great crested newt (dated 1983-1987) some 1.5km northwest of the Study Area. Records for other common amphibians within 2km of the Site include common frog (*Rana temporaria*), common toad, smooth newt (*Lissotriton vulgaris*) and palmate newt (*Lissotriton helveticus*), with the closest record being for a common frog within a residential estate located adjacent to Tesco Extra supermarket, near the northern boundary of the Study Area.

3.49 Overall, circa five wet ditches were identified within the Study Area with potential suitability to support an amphibian population whilst surface water flooding across field **F3** may provide additional aquatic habitat during the spring months to facilitate dispersal of a population if present, although likely to be unsuitable for breeding. A review of OS mapping indicates the presence of a single waterbody within 500m of the Study Area, associated with the steel recycling facility east of Rover Way.

3.50 With respect to terrestrial habitat within the Study Area, poor semi-improved grassland and ephemeral/short perennial communities, particularly where heavily grazed, is considered sub-optimal for a great crested newt and common amphibian population, given the short and homogeneous nature of the sward which offers limited cover, foraging and hibernation opportunities. Fields **F5-F7** are, however, of comparatively greater suitability given the absence of intense grazing pressure and poaching from livestock. Woodland and dense scrub communities offer an additional habitat resource for a great crested newt and common amphibian population, with the potential to facilitate the dispersal of this species across the wider semi-natural landscape.

3.51 The Study Area is, however, contained by main roads and development which would limit the dispersal of a great crested newt population between the Study Area and suitable habitat within the wider landscape. Nevertheless, in the absence of further survey effort,

¹⁶ Natterjack toad (*Epidalea calamita*) and Northern pool frog (*Pelophylax lessonae*) are EPS, protected under *Wildlife and Countryside Act 1981* (as amended) and priority species.

the presence of a greater created newt population cannot be ruled out, whilst the presence of other amphibian species is likely given their more common and widespread status.

Common Reptiles

- 3.52 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the *Wildlife and Countryside Act 1981* (as amended), making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.
- 3.53 A desk study returned several records for grass snake, common lizard and slow-worm, the closest being for a slow-worm circa 500m north and west of the Study Area associated with the railway line. A single record for adder was also returned, located circa 770m north of the Study Area.
- 3.54 Poor semi-improved grassland and ephemeral/short perennial communities, particularly where heavily grazed, are considered suboptimal for a reptile population given the short and homogeneous sward which offers limited cover, foraging and hibernation opportunities. Woodland and dense scrub communities, as well as more tussocky grassland communities associated with fields **F6** and **F7** are, however, considered more suitable and likely to support a population, whilst also facilitating dispersal of these species across the wider landscape.
- 3.55 Given the widespread distribution of common reptile species, presence of a population within the Study Area is likely, albeit largely limited to field boundaries with scrub and woodland habitat and those fields representative of a more structurally diverse sward or grassland/scrub mosaic.

Other Mammal Species

- 3.56 Records of the following priority mammal species were returned within 2km of the Study Area:
- European hedgehog (*Erinaceus europaeus*) – multiple records of this species, the closest within the Study Area adjacent to Tremorfa Park;
 - Harvest mouse (*Micromys minutus*) – a single record dated 2026 returned from Parc Tredelerch, circa 650m north of the Study Area;
 - Weasel (*Mustella nivalis*) – 3 records of weasel, the closest circa 460m north of the Study Area; and
 - Brown hare (*Lepus europaeus*) – seven records, the most recent of which is dated 2015, and all associated with the River Rhymney, Lamby Way and its environs (based on a 4-digit grid reference).
- 3.57 The Study Area encompasses suitable habitats for these species with scrub and woodland habitat in particular providing a suitable foraging resource and breeding/hibernation opportunities for European hedgehog and weasel. Whilst woodland is also suitable for

harvest mouse, this species favours tussocky grassland which is limited in extent across the Study Area and relatively disconnected from more suitable habitat in the wider landscape.

- 3.58 Overall therefore, there is a reasonable likelihood both European hedgehog and weasel are present on-site, with harvest mouse and brown hare less so given the more limited extent of suitable habitat for these species. Nevertheless, such species are not considered a significant constraint to future development of the Study Area.

Notable Invertebrates

- 3.59 A desk study returned several records of notable invertebrate species although the majority of these were historical (pre-2000). Pertinent to Pengam Moors within the Study Area, a desk study returned records for small heath (*Coenonympha pamphilus*), wall (*Lasiommata megera*) and the beetle *Pentastiridius leporinus*, all red data book species. Recent records for the wider environs within 2km of the Study Area include marsh fritillary (*Euphydryas aurinia*) and stag beetle (*Lucanus cervus*), both listed under Schedule 5 of the WCA (1981, as amended).
- 3.60 Species-poor grassland present on-site, particularly across Tremorfa Park and surrounds, and dense bramble scrub are considered likely to support a limited assemblage of common and widespread invertebrate species only, particularly given the homogenous nature of such habitats. Pengam Moors SINC, however, designated for lowland calcareous meadow, lowland meadow and open mosaic habitat on previously developed land, has potential to support populations of notable invertebrates where species-rich communities or a mosaic of different habitats occur, whilst the wet ditch network across field **F3** and areas of inundated grassland provide further opportunities for aquatic/semi-aquatic species. Such habitats are, however, heavily grazed and poached, reducing foraging opportunities for such species.
- 3.61 Overall, an invertebrate assemblage is not considered a significant constraint to future development of the Study Area, largely dominated by common and widespread habitats, and/or of sufficient size to accommodate any necessary mitigation with further opportunities to enhance grassland habitats for an invertebrate assemblage. Nevertheless, and where further botanical surveys were to identify species-rich and notable plant communities, further consideration of the invertebrate assemblage may be warranted.

Notable Plants

- 3.62 A desk study returned several records for notable plant species including records for Pengam Moors located within the Study Area. Several of these records are, however, historical, with some of the most recent being dated 1994-1997.
- 3.63 Overall and specific to the Study Area, records of the following red data book species were returned: parsley water dropwort (*Oenanthe lachenalia*), wild celery (*Apium graveolens*), charlock (*Sinapis arvensis*), dittander (*Lepidium latifolium*), wild cabbage (*Brassica oleracea*), common restharrow (*Ononis repens*), narrow-leaved bird's-foot-trefoil (*Lotus tenuis*) and sea cover (*Trifolium squamosum*). This is in addition to records of several red data book bryophyte species including common pocket moss (*Fissidens taxifolius*), Heim's pottia (*Hennediella heimii*) and tiny pocket moss (*Fissidens viridulus* agg.).

- 3.64 No notable plant species were identified during the Extended Phase 1 survey, although the survey was undertaken at a time of year when species are not in flower with growth further suppressed by extensive grazing and poaching by livestock. Of particular pertinence, Pengam Moors is designated for its rare maritime plants including sea clover, brackish water crowfoot and water whorl-grass. To inform a future planning submission, a botanical assessment of targeted areas within the Study Area is therefore recommended during the optimal season to identify locations of any notable plant communities.
- 3.65 A desk study also returned records of several invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). These include records for Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed, giant hogweed (*Heracleum mantegazzianum*), three-cornered garlic (*Allium triquetrum*), water fern (*Azolla filiculoides*), Canadian waterweed (*Elodea canadensis*) and *Cotoneaster* sp..
- 3.66 Several stands of Japanese knotweed were recorded within dense scrub habitat, predominantly along the northern and eastern margins of the Study Area with Rover Way, whilst a variety of *Cotoneaster* spp. was noted within mixed scrub habitat adjacent to the eastern boundary of the Application Site (**TN1** as illustrated on **Plan EDP 3**).

Section 4 Summary and Conclusions

- 4.1 This Preliminary Ecological Appraisal has been prepared by the Environmental Dimension Partnership Ltd (EDP) on behalf of Cardiff Council in relation to land at Pengam Gren, Cardiff. This Preliminary Ecological Appraisal provides a high-level assessment of the Study Area with respect to identifying key ecological constraints and opportunities to inform its future development, particularly in respect of a proposed Gypsy and Traveller Site across circa 8.5 hectares (ha) of land therein (the Application Site) for which a General Arrangement plan is provided at **Appendix EDP 1**.
- 4.2 A desk study identified seven statutory designations within the zone of influence (Zol) around the Study Area (excluding those designated for their geological features only). Cardiff Beechwoods SAC and Howardian LNR are considered sufficiently distant from the Study Area such that no impacts associated with habitat loss, air pollution and disturbance are anticipated. Cardiff Beechwood SAC is however, sensitive to recreational disturbance such that delivery of development which would increase the size of a local population requires further consideration in relation to potential effects arising upon this designation as a result. Nevertheless, the Study Area encompasses areas of existing public open space such as Tremorfa Park, whilst other parks and open green space, including the Wales Coast Path, are located in proximity to the Study Area, offering local, alternative opportunities for recreation.
- 4.3 The Severn Estuary Ramsar Site/SAC/SPA/SSSI (collectively referred to as the Severn Estuary European Marine Site (EMS)) is located directly adjacent to the eastern boundary of the Study Area and overlaps with a 0.07ha area east of Rover Way. Land overlapping with the boundaries of the Severn Estuary EMS should therefore be excluded from the red line boundary of any future development proposals. The Study Area is also hydrologically connected to the Severn Estuary EMS, such that there is the potential for an increase in contaminated surface water run-off from new development to flow into the estuary during both the construction and operation phase. It is anticipated that any new development will be delivered alongside a sustainable drainage strategy which will intercept and remediate surface water runoff prior to its discharge to the surrounding drainage network. The implementation of pollution control measures during construction, in accordance with a construction and Environmental Management Plan (CEMP) will also be required to ensure no adverse impacts arise to the water environment.
- 4.4 Of further consideration is the potential for the Study Area, or specific land parcels therein, to serve as functionally linked¹⁷ land for qualifying bird species of the Severn Estuary Ramsar site and SPA. Whilst development of the Study Area may result in the loss of suitable habitat for breeding and overwintering birds more generally, there is the potential for likely significant effects upon the favourable conservation status of the Severn Estuary EMS should onsite habitats be deemed critical to supporting populations of qualifying waders and wildfowl. Non-breeding/wintering bird surveys will therefore be required to inform any

¹⁷ Areas of land or sea occurring outside a designated site which is considered to be critical to, or necessary for, the ecological or behavioural functions in a relevant season of a qualifying feature for which a Special Areas of Conservation (SAC)/ Special Protection Area (SPA)/ Ramsar site has been designated.

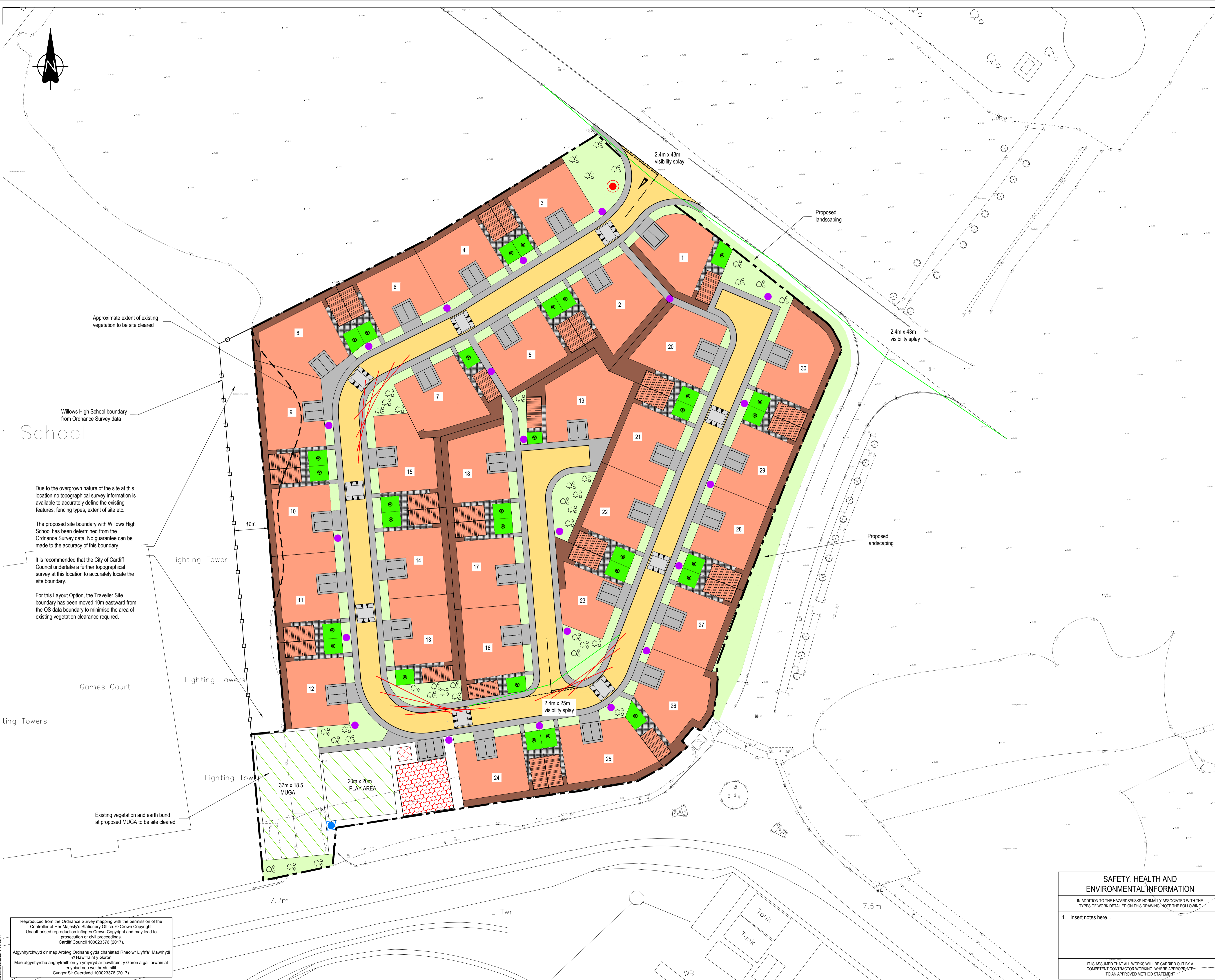
future planning application for development and a subsequent Habitat Regulations Assessment (HRA).

- 4.5 With respect to non-statutory designations, a desk study identified ten SINCs. For the most part, such non-statutory designations are sufficiently distant from the Study Area such that no effects will arise as a result of its development. Pengam Moors SINC does, however, overlap with the boundaries of the Study Area, including the Application Site for which a new Gypsy and Travellers site is proposed. Further assessment of the habitat/botanical communities for which the SINC is designated will be required during the optimum season to fully assess their condition and inform a mitigation strategy where such habitats are to be lost/damaged/disturbed following future development. Following an initial Extended Phase I habitat survey however, grassland habitats within the SINC were noted to be under heavy grazing pressure, with much bare ground due to poaching by horses and significant bramble encroachment. Subsequently, only a limited assemblage of common grassland species was recorded. There remains opportunity therefore, to enhance the current condition of Pengam Moors SINC through the sensitive long-term management of its habitats as mitigation for any proposed losses, with additional opportunities for delivery of net benefits to biodiversity. Such management measures may include, but are not limited to, provision of new species-rich tree and shrub planting, rotational hay cuts of grassland habitat, control of scrub, creation of wildlife ponds and/or control of grazing activities.
- 4.6 Outside of the boundaries of Pengam Moors SINC (discussed above), grassland habitats across the wider Study Area are predominantly species-poor/managed for amenity, and thus not considered a constraint to future development of the Study Area. Fields **F5-F7** are slightly more diverse however, with **F7** in particular likely managed for wildlife as part of the network of green open space, with new shrub planting evident here. Fields **F5** and **F6** appear unmanaged however and subject to significant scrub colonisation. Where retained within any future development proposals there is thus the potential to enhance these grassland areas through control of encroaching scrub as mitigation for impacts associated with habitat loss elsewhere, and/or to deliver net benefits to biodiversity as part of any future planning application. Plantain woodland and semi-mature/mature trees standards, as well as native hedgerows defining the boundaries of Tremorfa Park, are considered to be of comparatively higher ecological value and, combined with those habitats across the wider Study Area, are of further importance for protected and notable species, providing opportunities for foraging/breeding/roosting for a bat assemblage, breeding/wintering birds, amphibians, common reptiles and notable mammals such as European hedgehog and badger. Plantation woodland, semi-mature/mature trees standards and native hedgerows should be retained within any future development proposals as far as possible therefore, and protected in the long-term through the offsetting of these features from the development edge and inclusion of habitat buffers, accommodating the root protection areas of such features. Such habitat buffers would provide opportunities for new shrub and species-rich grassland planting, reinforcing retained boundaries whilst mitigating for losses elsewhere across the Study Area.
- 4.7 Where loss of such habitats is required to facilitate development, with loss of semi-mature trees likely to be required along the boundaries of the Application Site to facilitate development of the proposed Gypsy and Travellers Site, new planting will be required in mitigation for proposed trees losses at a minimum 3:1 replanting ratio in accordance with

the requirements of Planning Policy Wales 12 (Planning Policy Wales (PPW), whilst the removal of any woodland habitat requires re-planting of 1,600 broadleaved standards within any 1 hectare (ha) area. Nevertheless, given the size of the Study Area, including availability of land outside of the proposed development footprint for the Application Site, there is likely to be sufficient space and flexibility within the proposals to deliver mitigation for loss of valued habitats.

- 4.8 New planting as mitigation for habitat loss and impacts to protected/notable species may be further combined with the enhancement and long-term of those habitats to be retained, including those grassland habitats associated with Pengam Moors SINC, promoting structural and botanical diversity whilst providing additional breeding, foraging and hibernation opportunities for protected and notable species.
- 4.9 Should the Study Area come forward for development, further detailed habitat and species surveys will be required to inform a final masterplan design that is constraint-led, in addition to identifying an appropriate mitigation package for any ecological impacts that may arise upon specific valued habitats and protected/notable species to ensure opportunities for delivery of net benefits to biodiversity and ecosystem resilience are maximised.
- 4.10 Overall, however, it is concluded that future development of the Study Area offers sufficient flexibility to incorporate the appropriate inherent avoidance, mitigation and enhancement measures required to ensure that a development scheme could be implemented sensitively and in accordance with national and local planning policy and wildlife legislation.

Appendix EDP 1
Seawall Road General Arrangement Option 5 (Capita Infrastructure, 07
August 2017, GTS-CAP-0000-SWR-SK-C-SK09 Rev P0)



- NOTES**
- Proposed pitch size 25.5m x 19m (485 sq m minimum). MUGA dimensions of 37m x 18.5m suitable for tennis, mini-tennis, netball and five-a-side football. Dimension from Sport England Design Guidance Note 2013 "Artificial Surfaces for Outdoor Sport" Types 1 - 5 MUGA.
 - 20m x 20m play area dimensions from the Fields in Trust "Planning and Design Guidance for Outdoor Sports and Play" document as referenced in the Welsh Government Guidance "Designing Gypsy and Traveller Sites" document.
 - A 30mph speed limit on the approach roads to the Traveller Site has been assumed for sight stopping distance (SSD) purposes. Manual for Streets SSD at 30mph is 43m (SSD adjusted for bonnet length).
 - The Traveller Site internal access road will incorporate traffic calming features. This, together with the proposed 6m road width, will induce slower vehicle speeds. For SSD purposes on the internal access road, a 20mph speed limit has been assumed. Manual for Streets SSD at 20mph is 25m (SSD adjusted for bonnet length).
 - Internal road width to be 6m, footway width to be 1.8m.
 - Proposed boundary fencing to the site shall be 2.4m high security fencing. Proposed boundary fencing to each proposed pitch shall be 1.8m high close boarded fencing to side and rear of pitch with 1.5m high close boarded fencing to pitch frontage. Please note that the exact CCC fencing requirements are to be determined during detailed design stage.

- KEY**
- Site boundary
 - Proposed 4m x 4m secure gas bottle storage area
 - Proposed Site Warden Office / Pre-School / Community building
 - Proposed traffic calming (number and spacing to be confirmed at detail design stage)
 - 2.4 x 43m visibility splay
 - 25m forward visibility
 - CCTV / ANPR camera
 - CCTV to MUGA/Play Area
 - 6m high street lighting column
 - Proposed pitch
 - Proposed amenity block
 - Proposed carriageway
 - Proposed footway
 - Proposed landscaping / soft verge
 - Proposed landscaping within pitch
 - Proposed concrete paving slabs
 - Topsoil area for personal planting
 - Existing reed network
 - Proposed landscaping/planting to Communal Areas

Approximate extent of existing vegetation to be site cleared

Willows High School boundary from Ordnance Survey data

School

Due to the overgrown nature of the site at this location no topographical survey information is available to accurately define the existing features, fencing types, extent of site etc.

The proposed site boundary with Willows High School has been determined from the Ordnance Survey data. No guarantee can be made to the accuracy of this boundary.

It is recommended that the City of Cardiff Council undertake a further topographical survey at this location to accurately locate the site boundary.

For this Layout Option, the Traveller Site boundary has been moved 10m eastward from the OS data boundary to minimise the area of existing vegetation clearance required.

Lighting Tower

10m

Games Court

Lighting Towers

Existing vegetation and earth bund at proposed MUGA to be site cleared

Rev	Drawn	Checked	App'd	Description	Date
	TJ	GM	DW	First Issue	07/08/2017

Purpose of Issue (Suitability / Status)

S2 - Issued for Information

Classification

Commercial in Confidence

Client

City of Cardiff Council

Project

Gypsy Traveller Sites

Drawing

**Seawall Road
General Arrangement
Option 5 - 25.5 x 19m Pitch 30 No.**

Scale @ A1	Drawn	Checked	Approved
1:500	TAJ	GM	DW

Project No.	Date
CS091702	07-AUG-2017

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

1. Insert notes here...

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Project - Originator - Asset - Location - Type - Role - Number

GTS-CAP-0000-SWR-SK-C-SK09

revision **P0**

STRATEGIC PLANNING

CYMRUDDO STRATEGOL

ANDREW GREGORY
DIRECTOR FOR STRATEGIC PLANNING, HIGHWAYS, TRAFFIC AND TRANSPORTATION

CYMRUDDO STRATEGOL
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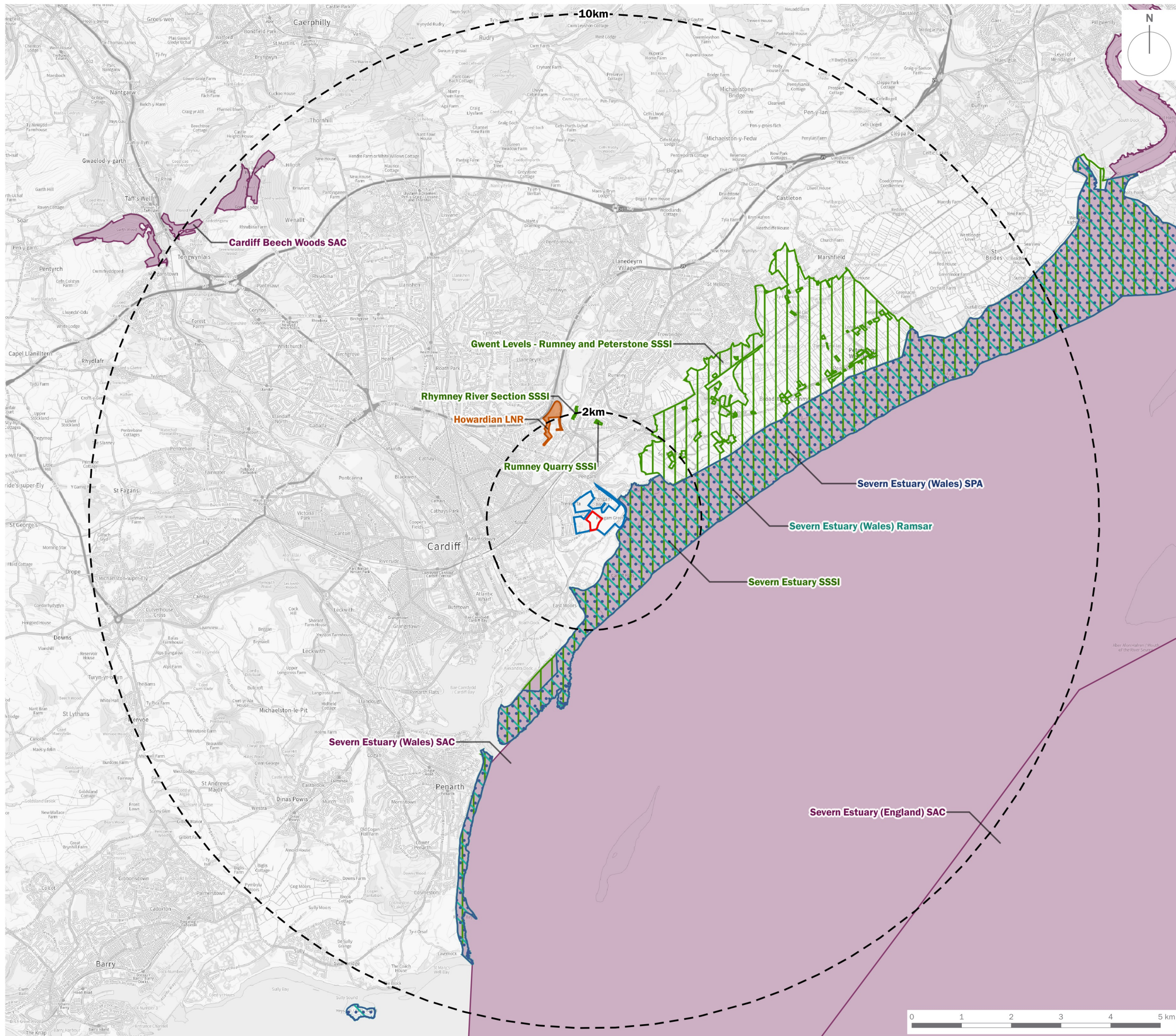
Allynthychwyd of map Arolwg Ordmanys gyda chaniatod Rheolwr Llyfrfa'i Mawrhydyl © Hawlfraint y Goron.
Mae allynthychu anghyflathon yn ymryd ar hawlfraint y Goron a gall arwain at enwau neu weithredu safi.
Cyngor Sir Caerdydd 100023376 (2017).

Plans

Plan EDP 1: Statutory Designations
(edp6901_d001 18 February 2026 GYo/EWi)

Plan EDP 2: Non-statutory Designations
(edp9601_d008 11 May 2026 JGr/EWi)

Plan EDP 3: Phase I Habitat Plan
(edp9601_d002 18 February 2026 GYo/EWi)



- Site Boundary
- Study Area
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site
- Site of Special Scientific Interest (SSSI) (within 2km)
- Local Nature Reserve (LNR) (within 2km)

DRAFT

client
Cardiff Council

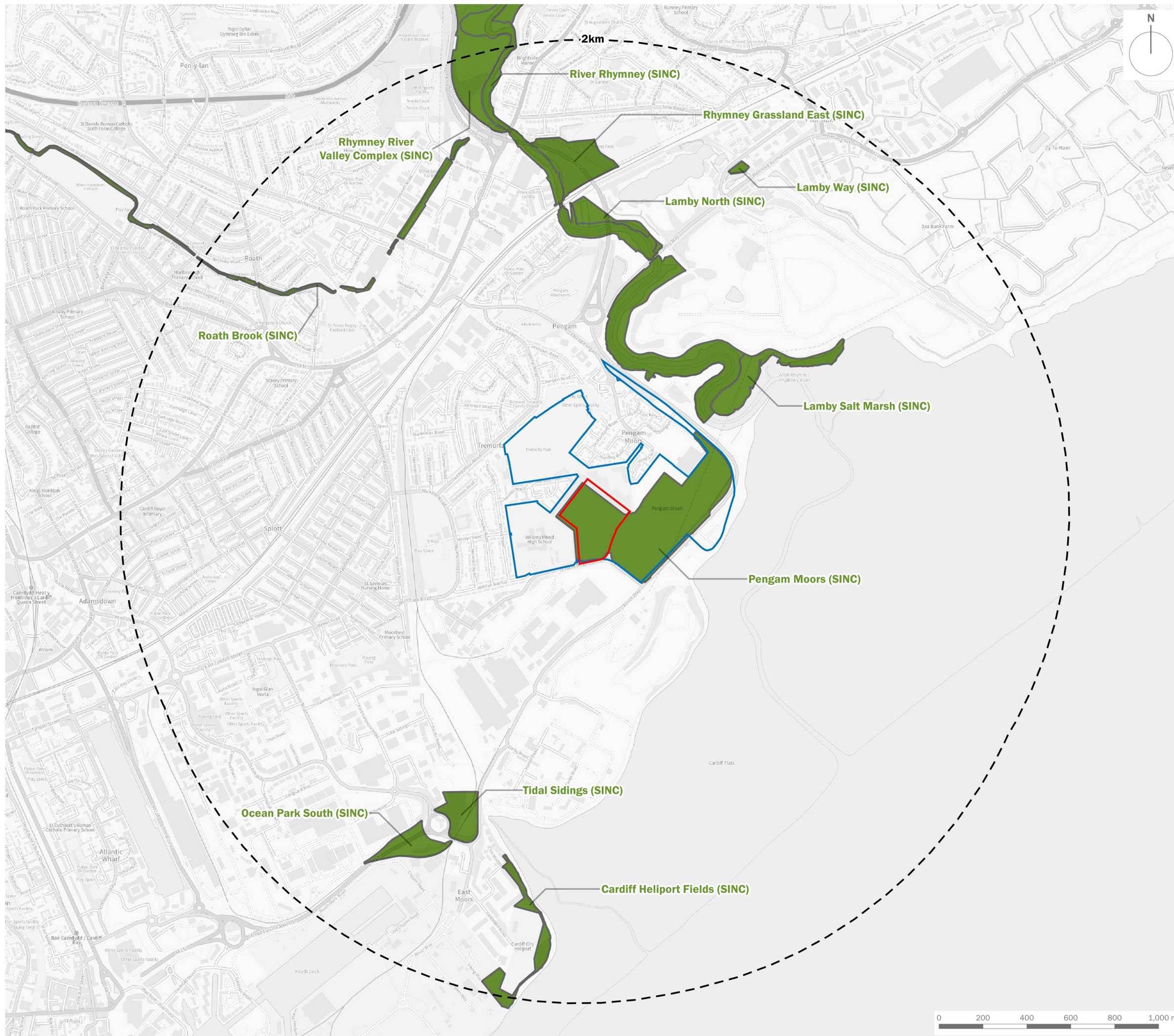
project title
Pengam Green, Cardiff

drawing title
Statutory Designations

date **18 FEBRUARY 2026** drawn by **Gyo**
drawing number **edp9601_d001** checked **EWI**
scale **1:75,000 @ A3** QA



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DRAFT

- Site Boundary
- Study Area
- 2km Range Ring
- Site of Importance for Nature Conservation (SINC)

client
Cardiff Council

project title
Pengam Moor, Cardiff

drawing title
Non-statutory Designations

date **11 MAY 2026** drawn by **JGr**
drawing number **edp9601_d008** checked **EWI**
scale **1:17,000 @ A3** QA



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- Site Boundary
- Study Area
- Broadleaved Plantation Woodland
- Scattered Trees/Parkland (Broadleaved)
- Dense Continuous Scrub
- Scattered Scrub
- Cleared Scrub
- Tall Ruderal
- Scrub and Tall Ruderal
- Ephemeral/Short Perennial
- A
- SI
- Marsh/Marshy Grassland
- Building
- Hardstanding
- Bare Ground
- No Access
- Intact Species-poor Hedgerow and Trees
- Intact Species-poor Hedgerow
- Scattered Trees/Line of Trees (Broadleaved)
- Wet Ditch
- Dry Ditch
- Fence
- Wall
- Scattered Trees (Broadleaved)
- Scattered Scrub
- Japanese Knotweed
- Target Note

client
Cardiff Council

project title
Pengam Green, Cardiff

drawing title
Phase 1 Habitat Plan

date **18 FEBRUARY 2026** drawn by **GYo**
drawing number **edp9601_d002** checked **EWI**
scale **1:4,000 @ A3** QA



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**URBAN
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Institute**
Registered practice