

Cardiff Council

Cardiff International Sports Village

Winter Bird Survey Report 2022/2023

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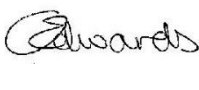

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Executive Summary

Ove Arup and Partners Limited (Arup) have been commissioned by Cardiff Council to undertake a range of design and consultancy services, including environmental services, to inform the proposed development/redevelopment of land at Cardiff International Sport Village. The completed Preliminary Ecological Appraisal report noted that the Severn Estuary Special Protection Area, Ramsar site and Site of Special Scientific Interest are located approximately 1.5km to the east of the Site. Given the proximity of the proposed development to the Severn Estuary there is the potential for the proposed development to result in impacts to the designated features, potentially to overwintering and passage birds. Consequently, wintering bird surveys were undertaken over the 2022/2023 winter.

Surveys were carried out on six occasions, once a month from October 2022 to March 2023. Surveys were undertaken on each occasion at either high or low tide. The extent of the Site was walked using a transect based approach across suitable habitat. The transect route was devised in order to encompass a range of representative habitats on site which had the potential to support wintering birds, including Cardiff Bay.

A total of 26 target species were recorded during the winter bird surveys; five species of gull, eight species of Anseriformes (ducks, geese and swans), and 13 other species, including Section 7 species.

Nine target species were recorded on either (or both) of the Welsh Red and British Red List. Fifteen target species were recorded on both the Welsh Amber and/or British Amber List. Nine target species were listed on Section 7. The majority of the target species observations were located on the water of Cardiff Bay.

No qualifying species were recorded as listed under the Severn Estuary SPA or Ramsar site. Peak counts of assemblage features were approximately 1% of the SPA and Ramsar population, and 1.7% of the Severn Estuary SSSI. Excluding gulls from these totals, reduces the assemblage population percentage.

Any impact from the proposed works on features of designated sites, e.g. wintering birds, should be evaluated as part of the project level Ecological Impact Assessment (or Environmental Impact Assessment, depending upon scope of redevelopment) to support the planning application following appropriate guidelines¹.

Any proposed works should be considered within a Habitats Regulations Assessment to assess the potential impact on European designated sites, and any functionally linked habitat, e.g. Cardiff Bay.

It is recommended that habitat retention, protection and, if necessary, replacement and enhancement measures, are implemented during the design process. Measures to ensure avoidance of disturbance to waterbirds on Cardiff Bay is recommended, both during construction and operation.

¹ CIEEM, 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Second Edition. CIEEM, Winchester.

1. Introduction

1.1 Background

Ove Arup and Partners Limited (henceforth referred to as 'Arup') have been commissioned by Cardiff Council to undertake a range of design and consultancy services, including environmental services, to inform the proposed development/redevelopment of land at Cardiff International Sport Village (ISV) (henceforth referred to as the 'Site'). Services provided include the completion of an Extended Phase 1 Habitat survey and production of a Preliminary Ecological Appraisal (PEA) report. The completed PEA report² noted that the Severn Estuary Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI) are located approximately 1.5km to the east of the Site. Given the proximity of the proposed development to the Severn Estuary there is the potential for the proposed development to result in impacts to the designated features, potentially to overwintering and passage birds. Consequently, wintering bird surveys were undertaken over the 2022/2023 winter.

This report presents the methods and findings of a desk study and wintering bird survey undertaken within the site and on the adjacent Cardiff Bay.

1.2 Site Context

The site is located within the ISV area in Cardiff Bay, Cardiff. The site area equates to 10ha with a central National Grid Reference of ST 17924 73019 (Appendix A.1).

The site is within an urban setting and comprises of existing ISV facilities, former retail premises and two brownfield parcels to the east and west of Olympian Drive. The existing ISV infrastructure includes Cardiff International Pool & Gym and Ice Arena Wales on the east, and commercial development in form of the former Toys R Us building to the west. Large areas of hard standing in the form of roads and car parking for the existing infrastructure are present within the site. Areas of amenity grassland and introduced shrub are associated with the existing developed land. The brownfield parcels east and west of Olympian Drive consist of a mosaic of habitats including ephemeral, tall ruderal and scrub with areas of bare ground. An area of semi-natural broadleaved woodland borders the northwest of the site located between the site and the A4055 road.

1.3 The Proposed Development

The proposed development would likely come forward in the form of a hybrid planning application to include:

- Full details in relation to the proposed closed road cycling circuit, activity zones, highway changes and public realm works (hard and soft landscaping);
- Change of use of the former Toys R Us building; and
- Outline details for a future Multi-Storey Car Park (MSCP).

These works form the final stages of the proposed 'Sport Zone' as part of the wider vision for the ISV and following permission which was granted in 2022 for the proposed outdoor velodrome.

Each of the application elements is described further below.

1.3.1 Full Application

The full element of the application would include several proposals which seek to add to the sporting offer within this part of the ISV, or bring together existing and proposed uses, creating a high-quality public space at the centre of the sports zone. The proposals include:

² Preliminary Ecological Appraisal (PEA), Cardiff International Sport Village, issued 10 November 2022.

- Closed Road Circuit – proposed around the perimeter of the sports zone, this facility would provide a traffic-free cycling circuit for training and race events;
- Off-road bike track – providing opportunities for mountain bike and BMX style riding within a safe, designed environment; and
- Public Realm works – including soft and hard landscaping, biodiversity enhancements and the installation of informal sporting spaces/urban parks.

1.3.2 Change Of Use

The former Toys R Us building is located in the centre of the site and to the south of the proposed velodrome. The building has more recently been used as a COVID-19 vaccination centre, but this use has now ceased.

Exact proposals for the building are currently being finalised with discussions ongoing with potential end users. The vision for the building includes the introduction of more sport related activities, some retail space as well as office provision to serve sporting governing bodies.

1.3.3 Outline Application

The outline element of the application would include proposals for a MSCP in the northeast corner of the masterplan site. The car park would have a capacity of circa 1,000 spaces and would be located to service the ISV development with access proposed off International Drive.

1.4 Legislative and Policy Context

1.4.1 Protected Site Designations

A network of nationally designated sites has been established through the designation of SSSIs under the Wildlife and Countryside Act (WCA) 1981 (as amended). Sites are designated if they are of special interest by reason of their flora, fauna (e.g. birds), or geological or physiographical features. The protection afforded by the WCA means it is an offence to carry out or permit to be carried out any operation listed within the notification without the consent of the Statutory Nature Conservation Organisation (Natural Resources Wales, NRW). The protection afforded to SSSIs is used to underpin the designation of areas at a European Level.

Some bird species are listed as features of internationally designated sites, notably SPAs and Ramsar sites. SPAs are classified in accordance with Article 4 of the EC Birds Directive (2009/147/EC). The provisions of the Birds Directive are implemented and transposed to UK legislation through the WCA and the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). Additionally, The Habitats Regulations 2017 transposes EC Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora into UK national law.

Ramsar sites are also afforded protection under the Ramsar Convention 1971.

These designations are applied to areas that support nationally important numbers of birds, the conservation of which is necessary for the maintenance of the range of that certain species across Europe. A site may be designated as a SPA based on its importance to breeding, wintering, or migratory birds. In the UK, SPA designations are underpinned by national legislation which identifies them as SSSIs.

1.4.2 The Environment (Wales) Act 2016

The Environment (Wales) Act 2016³ aims to build the resilience of Welsh ecosystems which in turns helps create jobs, supports livelihood and human well-being, adapt to the adverse impacts of climate change, and contribute towards sustainable development. The Act has duties and commitments to reverse the decline in biodiversity in Wales and increase the resilience of Welsh ecosystems. It requires all public authorities to “seek to maintain and enhance biodiversity in the exercise of its functions in relation to Wales, and in so

³ Welsh Government (2016) *Environment (Wales) Act 2016*. Available at: <https://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions”. As set out in the letter from the Climate Minister (December 2022)⁴ “in complying with the duty public authorities must take account of the resilience of ecosystems, in particular the following aspects (known as the DECCA Framework):

- diversity between and within ecosystems;
- the connections between and within ecosystems;
- the scale of ecosystems;
- the condition of ecosystems (including their structure and functioning); and,
- the adaptability of ecosystems.

In relation to the duty public authorities must also have regard to:

- the priority habitats and species list published under Section 7 of the Act;
- the State of Natural Resources Report (SoNaRR) published under Section 8;
- any Area Statement published under Section 11 for an area that includes all or part of an area in relation to which the authority exercises functions; and,
- to any guidance given to it by the Welsh Ministers.

1.4.3 Status Of Wintering Birds at International Level

Threatened bird species are listed on Annex 1 of the European Union (EU) Birds Directive (Directive 79/409/EEC)⁵ if they are:

- in danger of extinction;
- vulnerable to specific changes in their habitat;
- considered rare due to small populations or restricted local distribution; and,
- requiring particular attention because of the specific nature of habitat.

In the UK, the aim is to conserve Annex 1 species by protecting their most valuable territories as SPAs, in line with EU legislation, given that it is transposed into UK law, as detailed in Section 1.4.11.4.1. The Annex 1 list includes 193 species and sub-species, although many of these species do not regularly occur in the UK.

1.4.4 Status Of Wintering Birds at National Level

All wild birds, their nests and their eggs are protected by the WCA and the Countryside and Rights of Way (CRoW) Act 2000⁶. Offences under the WCA Act include intentionally or recklessly:

- killing injuring or taking any wild bird;
- taking, damaging or destroying the nest of any wild bird whilst it is in use or being built; and
- taking or destroying the egg of any wild bird.

Birds listed on Schedule 1 of the WCA have further protection, making it an offence to intentionally or recklessly disturb parent birds while they are nesting, or their dependent young.

⁴ Welsh Government (2022) *COP15, Biodiversity Deep Dive, Section 6 Duty and the Planning System*. Available at: <https://www.gov.wales/sites/default/files/publications/2022-12/cop15-biodiversity-deep-dive-section-6-duty-and-the-planning-system.pdf>

⁵ European Commission. (2022) *Wild Birds: Threatened bird species in Annex I*. Available at: https://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm

⁶ *Countryside and Rights of Way Act 2000 Chapter 37*. Available at: https://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf

The WCA is supplemented by the Environment (Wales) Act 2016. Public authorities must have regard to relevant evidence provided in the State of Natural Resources Report and any relevant area statement for an area in which the authority exercises functions, as well as having regard to the list of living organisms and habitats published under Section 7 of the Act. Species and habitats listed on Section 7 are considered to be of principal importance for the conservation of biological diversity.

1.4.5 Species of Principal Importance

Many bird species are listed as a UK Biodiversity Action Plan (BAP) species. Although the UKBAP 1994 – 2010 has been superseded by the UK Post-2010 Biodiversity Framework covering the period 2011 – 2020, the list of UK BAP bird species has been used to form the basis for the statutory list of Species of Principal Importance (SoPI) for the conservation of biodiversity in Wales as listed in accordance with Section 7 of The Environment (Wales) Act 2016⁷, which replaces Section 42 of the NERC Act 2006. The list of SoPIs includes 51 species of bird. In Wales, the Biodiversity Action Plan process is overseen by the Wales Biodiversity Partnership, ensuring action plans are developed for each key species and habitat.

1.4.6 Birds of Conservation Concern

The fifth review of the status of wild birds in Great Britain was undertaken in 2021 in Birds of Conservation Concern 5 (BoCC5)⁸. Species were assessed and assigned to the red, amber and green lists based on the level of conservation concern for that species. There are 70 species on the BoCC5 red list, 103 on the amber list and 72 on the green list. Under BoCC5, birds are classified into three lists based on the following criteria:

Red List:

- IUCN: Globally threatened;
- Historical decline in breeding population decline (severe decline between 1800 and 1995) and no subsequent recovery;
- Severe decline of >50% in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments starting in 1969); and,
- Severe decline in UK breeding range of >50% between the breeding bird atlases in 1988-91 and 2007-11 or 1968-71 and 2007-11.

Amber List:

- ERLOB (European Red List of Birds): Threatened in Europe;
- Historical decline – recovery. Species previously re-listed for historical decline, followed by an increase of at least 100% over 25 year or the longer-term period;
- Moderate (decline (>25% but <50%) in UK breeding population size over last 25 years, or the longer-term period;
- Moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period;
- Moderate breeding range decline (>25% but <50%) between the breeding bird atlases in 1988-91 and 2007-11 or 1968-71 and 2007-11;
- Rare breeder with <300 breeding pairs in UK;
- Breeding localisation with more than 50% of UK population in 10 or fewer sites (either SPAs or Important Bird Areas) in the breeding season; and,

⁷ Welsh Government (2016) *Section 7 Priority Species*. Available at: <https://www.biodiversitywales.org.uk/Section-7>

⁸ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain', *British Birds*, 114, pp. 723 – 747.

- Breeding international importance with at least 20% of European population in UK during the breeding season.

Green list:

All regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from historical decline in the last review that have continued to recover and do not qualify under any of the other criteria.

1.4.7 Birds of Conservation Concern (Wales)

The fourth review of the status of wild birds in Wales was undertaken in 2022 in Birds of Conservation Concern Wales 4 (BoCCW4)⁹. Species were assessed and assigned to the red, amber and green lists based on the level of conservation concern for that species. There are 60 species on the BoCCW4 red list, 91 on the amber list and 69 on the green list. Under BoCCW4, birds are assessed against the standardised criteria as provided above for BOCC5.

Although the BoCC lists confer no legal status in themselves, they are useful in evaluating the importance of bird species and assemblages.

1.4.8 Status Of Wintering Birds at County Level

Local Biodiversity Action Plans (LBAP) are a means for delivering UK BAP targets at a local level, identifying key species and habitats within each Local Authority area for which action plans are formulated. Particular attention has been paid to the Cardiff LBAP¹⁰ and the Species Action Plans listed within this, which includes two species of bird (hawfinch *Coccothraustes coccothraustes* and the pied flycatcher *Ficedula hypoleuca*). The latter species is unlikely to be present noting it is a summer migrant.

1.5 Objectives

The survey objectives were to:

- 1) gain an understanding of the wintering bird assemblage present using a transect survey methodology within representative habitats within the study area, assessing the species present and relative abundance within different habitat types;
- 2) highlight any key species of particular conservation value that may influence the design of the project; and
- 3) provide sufficient information to inform the assessment of impacts on wintering birds from the proposed development as part of any Ecological / Environmental Impact Assessment (EcIA/EIA) and Habitats Regulations Assessment (HRA).

⁹ 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: the Journal of the Welsh Ornithological Society*. Available at: <https://tinyurl.com/BoCCW4>

¹⁰ Cardiff Council, 2008. Cardiff Local Biodiversity Action Plan.

2. Methodology

2.1 Desk Study

A desk study was undertaken in relation to the Preliminary Ecological Appraisal². The following components of that study are those relevant to birds. South East Wales Biodiversity Records Centre (SEWBReC) provided biodiversity records data¹¹ on 18 August 2022.

2.1.1 Designated Sites

The MAGIC (Multi-Agency Geographic Information for the Countryside) website¹² was used to identify statutory designated sites. Search radii of 10 km and 2 km were employed for European and nationally designated sites, respectively.

The Joint Nature Conservation Committee (JNCC) website¹³ and NRW designated sites website¹⁴ provided details and descriptions of protected sites, with cross-reference to maps and citations.

Non-statutory site information within 2 km of the site was obtained from SEWBReC as well.

2.1.2 Species

Protected and notable species within 2km of the site were obtained. This included protected species and species of principal importance.

2.2 Survey Methods

The extent of the Site was walked using a transect based approach across suitable habitat. The transect route was devised in order to encompass a range of representative habitats on site which had the potential to support wintering birds, including Cardiff Bay, scrub/ruderal habitat and hardstanding, including any ephemeral freshwater pools that may form.

The transect did not cover the entirety of the Site, however any significant aggregations of target species (Section 2.2.1) would have been noted, and these areas of limited visibility are small in extent. It is considered likely that the numbers of birds reported are to represent total numbers of target species on Site, given the small size of the site and the regular disturbance from public and other activities which could limit numbers of target species on Site. Target species were counted up to approximately 250m into Cardiff Bay.

The total length of the transect route was 1.22km (Appendix A.2). For the March survey the transect route increased to cover an expanded red-line boundary and covered a total length of approximately 2.30km (Appendix A.3).

The transect survey method used in undertaking assessments of wintering birds was derived from current best practice as described in Bibby *et al.* 1992¹⁵ and Gilbert *et al.* 1998¹⁶, and conforms to the recommendations of the British Trust for Ornithology (BTO) and the JNCC.

¹¹ LERC Wales' Biodiversity Information & Reporting Database, 2022. Cardiff International Sport village. LERC Reference: 0223-554 (accessed 25/08/2022).

¹² Defra website. *MAGIC, for maps of statutory nature conservation sites and Section 41 NERC Act habitats of principal importance*. Available at: <https://magic.defra.gov.uk/> [Accessed 19/07/2022].

¹³ Joint Nature Conservation Committee. *UK Protected Areas*. Available at: <https://jncc.gov.uk/our-work/uk-protected-areas/> [Accessed 05/12/2022].

¹⁴ <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/find-protected-areas-of-land-and-sea/?lang=en> (accessed 25/08/2022).

¹⁵ Bibby *et al.* (1992) *Bird Census Techniques*, Second Edition. Academic Press

¹⁶ Gilbert, G., Gibbons D. W., and Evans, J. (1998) *Bird Monitoring Methods*. RSPB

Surveys were carried out on six occasions, once a month from October 2022 to March 2023. Surveys were undertaken on each occasion at either high or low tide. Each survey was undertaken within three hours, either at a low or a high tide state. Surveys undertaken at different tidal states were completed in order to understand any variation associated with changes in water level in the Severn Estuary. Use of the site in Cardiff Bay could change with tidal state given potential movement from Cardiff Bay (with regulated water levels) to the tidal Severn Estuary, where birds could forage at low tide and potentially roost at high tide, or be displaced into Cardiff Bay.

All wintering bird surveys were carried out by a team of two surveyors, with at least one surveyor experienced in undertaking ornithological surveys using the above methods. The direction of the transect route was reversed between surveys to account for diurnal variation in wintering bird activity.

The wintering bird surveys were carried out at appropriate times of the year and weather conditions on all visits were considered suitable. The dates of the surveys and weather conditions are shown in Appendix B.

Survey results were captured using tablet devices in order to improve data collection efficiency and mapping precision, and include details of weather data, species present, numbers of individuals and their behaviour.

2.2.1 Target Species

Given the above legislation and policy at European, national and local level certain bird species are targeted for further consideration during the proposed bird surveys. Target bird species are those listed as qualifying features of SPAs and Ramsar sites. These species are considered in order to inform any future Habitat Regulations Assessments (HRA).

With respect to the proposed redevelopment additional bird species are listed below, which are listed as qualifying features of SSSIs. These species include wintering, migratory and breeding species. For inclusivity all breeding species are included even though in reality many breeding species will be permanently absent over the winter period.

Target bird species, listed within each designated site are as below (full details provided within Section 4.1.1):

- Severn Estuary Ramsar: Bewick's swan *Cygnus columbianus bewickii*, greater white-fronted goose *Anser albifrons albifrons*, shelduck *Tadorna tadorna*, gadwall *Mareca strepera strepera*, dunlin *Calidris alpina alpina*, redshank *Tringa totanus totanus*, ringed plover *Charadrius hiaticula*, teal *Anas crecca*, pintail *Anas acuta*. All wetland birds are included under the assemblage feature from a precautionary perspective; further consultation is advised with NRW to confirm the exact composition of the assemblage feature given this is not readily available in the public domain. Inclusion of all wetland birds also allows for those species identified subsequent to designation for possible future consideration to be targeted as well.
- Severn Estuary SPA: Bewick's swan, ringed plover, curlew *Numenius arquata*, dunlin, pintail, redshank, shelduck, gadwall, wigeon *Mareca penelope*, lapwing *Vanellus vanellus*, teal, mallard *Anas platyrhynchos*, shoveler *Anas clypeata*, pochard *Aythya ferina*, tufted duck *A. fuligula*, grey plover *Pluvialis squatarola*, white-fronted goose and whimbrel *Numenius phaeopus*. All wetland birds are included under the assemblage feature.
- Severn Estuary SSSI: curlew, redshank, ringed plover, grey plover, common snipe *Gallinago gallinago*, knot *Calidris canutus*, whimbrel, turnstone *Arenaria interpres*, dunlin, shelduck and wigeon.

Species listed on Cardiff Council's LBAP and those listed on Section 7 of the Environment (Wales) Act were also recorded where possible. Species not defined as target species are recorded as incidental; these species are listed within Appendix D and displayed on Appendices A.5 to A.10; however they are not discussed further.

2.3 Limitations and Assumptions

Whilst small areas of the site were not completely visible, e.g. hoarded area north of the site, it is considered that the most representative and suitable habitat on site for wintering birds was surveyed. Furthermore, given the small size of this area, the ruderal habitat and the general disturbance of the area, it is considered unlikely that target species (largely waterbirds) would be using this area. The March survey was undertaken at mid-tide in order to fit with daylight and expected weather conditions. Survey results are not considered limiting from March, given that tidal variation is likely not to be a large factor in waterbird abundance at this site.

Highly mobile bird species, e.g. gulls, may be under-represented due to the necessity to avoid double-counting.

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of species, such as weather conditions, migration patterns and behaviour.

Nevertheless, these surveys were conducted at the optimal survey periods. Every effort has been made to ensure that the findings of the study present as accurate an interpretation as possible of the status of wintering birds within the study area.

3. Results

3.1 Desk Study

3.1.1 Designated Sites

The desk study identified a number of internationally, nationally and locally designated Sites within the search areas. Only those sites are reported with reference to birds as a feature.

The Severn Estuary SPA, located approximately 1.5km to the east of the Site boundary, is designated due to supporting internationally important populations of regularly occurring Annex 1 and migratory assemblages of wildfowl bird species¹⁷. The Severn Estuary Ramsar Site, also located approximately 1.5km to the east of the Site boundary, is designated due to many of the SPA features but in particular: the presence of internationally important waterfowl populations largely during winter, and on passage and summer¹⁸ (Appendix A.4). The specific qualifying species are listed in Table 1 below.

Table 1. Qualifying species of the Severn Estuary SPA and Ramsar site.

Severn Estuary SPA
<p>Annex I species qualifying under Article 4.1 of Birds Directive:</p> <ul style="list-style-type: none">• Bewick's swan <i>Cygnus columbianus bewickii</i> (the 5-year peak mean population size for the Bewick's swan population is no less than 289 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3))• Dunlin <i>Calidris alpina</i> (the 5-year peak mean population size for the wintering dunlin population is no less than 41,683 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3))• Gadwall <i>Mareca strepera</i> (the 5-year peak mean population size for the wintering gadwall population is no less than 330 (i.e. the 5-year peak mean between 1988/9 - 1992/3))• Common redshank <i>Tringa totanus</i> (the 5-year peak mean population size for the wintering redshank population is no less than 2,013 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3))• Common shelduck <i>Tadorna tadorna</i> (the 5-year peak mean population size for the wintering shelduck population is no less than 2,892 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3))• Greater white-fronted goose <i>Anser albifrons albifrons</i> (the 5-year peak mean population size for the wintering European white fronted goose population is no less than 3,002 individuals (i.e. the 5-year peak mean between 1988/9-1992/3)) <p>Under Article 4.2, the site supports in winter over 20,000 waterfowl:</p> <p>Waterfowl assemblage (the 5-year peak mean population size for the waterfowl assemblage is no less than 68,026 individuals (i.e. the 5-year peak mean between 1988/9 - 1992/3))</p>
Severn Estuary Ramsar (only avian criteria listed)
<p>Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 70919 waterfowl (5-year peak mean 1998/99-2002/2003)</p> <p>Ramsar criterion 6: species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none">• Tundra swan, <i>Cygnus columbianus bewickii</i>, NW Europe 229 individuals, representing an average of 2.8% of the GB population (5-year peak mean 1998/9- 2002/3)• Greater white-fronted goose, <i>Anser albifrons albifrons</i>, NW Europe 2076 individuals, representing an average of 35.8% of the GB population (5-year peak mean for 1996/7-2000/01)• Common shelduck, <i>Tadorna tadorna</i>, NW Europe 3223 individuals, representing an average of 1% of the population (5-year peak mean 1998/9- 2002/3)• Gadwall, <i>Mareca strepera strepera</i>, NW Europe 241 individuals, representing an average of 1.4% of the GB population (5-year peak mean 1998/9- 2002/3)

¹⁷ JNCC, 2015. Natura 2000 – standard data form, Severn Estuary SPA

¹⁸ JNCC, 2008. Information Sheet on Ramsar Wetlands, Severn Estuary

Severn Estuary SPA

- Dunlin, *Calidris alpina alpina*, W Siberia/W Europe 25082 individuals, representing an average of 1.8% of the population (5-year peak mean 1998/9-2002/3)
- Common redshank, *Tringa totanus totanus*, 2616 individuals, representing an average of 1% of the population (5-year peak mean 1998/9- 2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species regularly supported during the breeding season:

- Lesser black-backed gull, *Larus fuscus graellsii*, W Europe/Mediterranean/W Africa 4167 apparently occupied nests, representing an average of 2.8% of the breeding population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

- Ringed plover, *Charadrius hiaticula*, Europe/Northwest Africa 740 individuals, representing an average of 1% of the population (5-year peak mean 1998/9- 2002/3)

Species with peak counts in winter:

- Eurasian teal *Anas crecca*, NW Europe 4456 individuals, representing an average of 1.1% of the population (5-year peak mean 1998/9-2002/3)
- Northern pintail, *Anas acuta*, NW Europe 756 individuals, representing an average of 1.2% of the population (5-year peak mean 1998/9- 2002/3)

There is one national statutory designated sites within 2km of the Site: the Severn Estuary SSSI. This designated site falls within the same boundary of the SPA and Ramsar designation (described above). The SSSI is important for a number of non-avian features, as well as being of international importance for wintering and passage wading birds, with total winter populations averaging about 44,000 birds¹⁹ (Appendix A.4).

Non-statutory designated sites (Sites of Importance for Nature Conservation, (SINC)) within 2km of the Site, and which have avian features, are noted within Table 2 below and displayed within the project PEA².

Table 2. Non-statutory designated Sites within 2km of the Site.

Site Name	Designation	Distance & Orientation from Site	Description
River Ely	SINC	0.1km, West/South	One of the three main rivers within Cardiff, flowing through the city and into Cardiff Bay. The river acts as a major wildlife corridor and is important for migratory fish, otters, wildfowl. Numerous species have been recorded along the river Ely including bats, otter, kingfisher <i>Alcedo atthis</i> and barn owl <i>Tyto alba</i> .
River Taff	SINC	0.5km, North	One of the three main rivers within Cardiff, flowing through the city and into Cardiff Bay. Important for migratory fish, otters, wildfowl and bankside vegetation and acts as a major wildlife corridor. Bats, otter, salmon, sea trout <i>Salmo trutta</i> , grass snake and kingfisher and amongst the diverse species recorded in and around the River Taff SINC.
Cardiff Bay Wetland & Reserve	SINC	0.9km, Northeast	A former salt marsh and a complex of grassland and shallow lagoons which provides feeding and nesting opportunities for many birds including bearded tit <i>Panurus biarmicus</i> , Cetti's warbler <i>Cettia cetti</i> and little egret <i>Egretta garzetta</i> ; important populations of wintering birds including snipe <i>Gallinago gallinago</i> and teal <i>Anas crecca</i> . Species including bats, common frogs and otters are present at this site which is also an important spawning area for coarse fish in Cardiff Bay.

¹⁹ Countryside Council For Wales, 1989. Site of Special Scientific Interest Citation, Severn Estuary

3.1.2 Bird Records

The data search returned 127 records of protected and notable bird species, of which 36 are Schedule 1 species (as listed on the WCA), 33 are Section 7 species, 36 are Red list species, and 34 are Welsh Red list species. Full details on the bird records returned are included in the project PEA².

3.2 Field Surveys

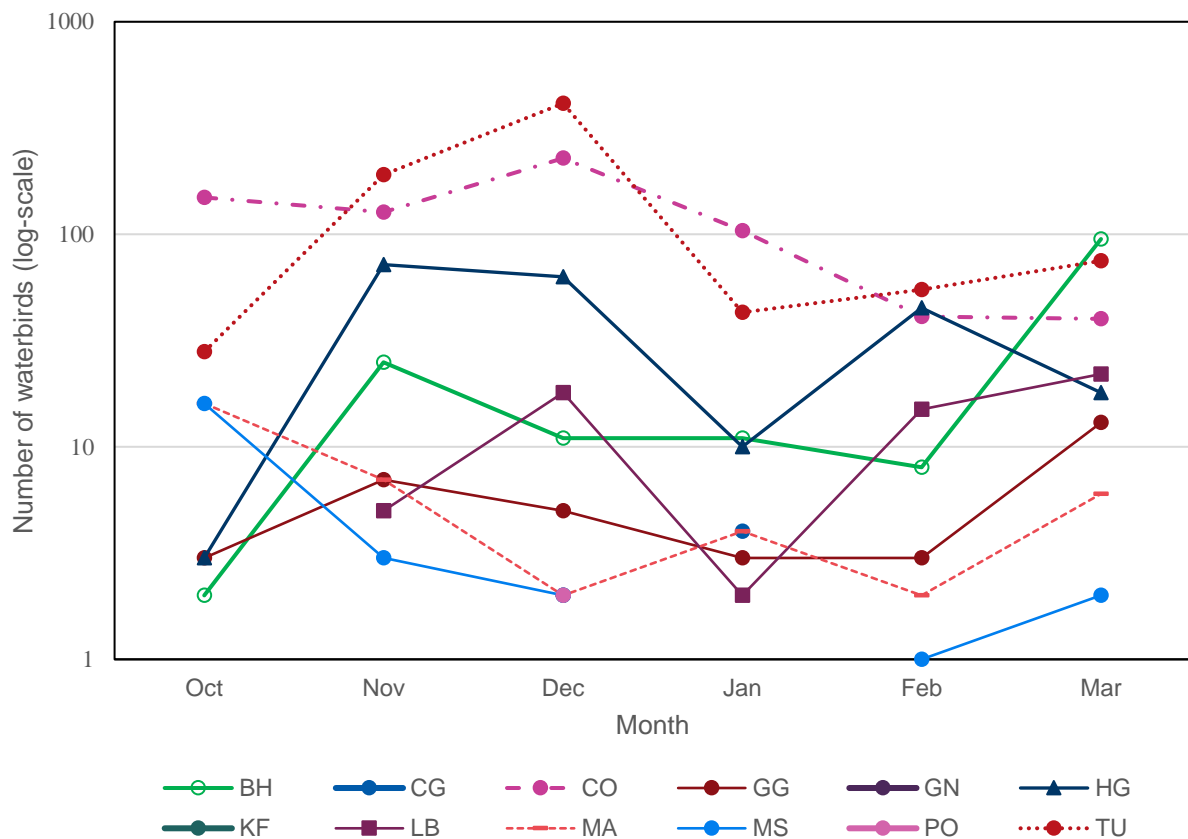
Six surveys were conducted over the 2022/2023 winter, from October 2022 to March 2023.

A total of 26 target species were recorded during the winter bird surveys; five species of gull, eight species of Anseriformes (ducks, geese and swans), and 13 other species, including Section 7 species (Appendix C).

3.2.1 Monthly Variation

Graph 1, Appendices A.5, A.6, A.7, A.8, A.9, and A.10, and Appendix C show the monthly variation in total numbers of birds across the winter split by species. Numbers of birds were relatively consistent from October through to March (within an order of magnitude), however the December survey had a larger number of birds present (total of 749) on site (excluding birds in flight) (Table 3), with tufted duck being the most abundant bird.

Graph 1 shows the monthly variation split by waterbird species. The pattern of an increasing abundance to December and then decreasing is relatively consistent across all species. Number of non-waterbird species are limited on site with small numbers of house sparrow *Passer domesticus*, starling, dunnock *Prunella modularis* and reed bunting *Emberiza schoeniclus*; these species showed no discernible difference in monthly abundance; they are not shown on Graph 1.



Graph 1. The monthly change in numbers across waterbird species. Species with only one individual per month are omitted for clarity.

3.2.2 Tidal Variation

Table 3 shows the change in the total number of waterbirds across tidal states. The March survey is excluded as the survey area increased and results are not comparable. Across the two tidal states – high and low tide – results are variable with low tide numbers being both the largest and smallest across the winter season. Low tide surveys had on average a greater number of birds (mean = 453) with high tide having a mean average of 201 birds in total. Whilst low tide has a greater number of birds present, the variation is large. Higher low tide numbers cannot be completely attributed to tidal state noting that seasonal variation in waterbird numbers may account for larger proportion of the variation. In summary, waterbird abundance is unlikely to be explained by tidal state from these limited data.

Diversity, as measured by species richness, is varied across the winter. As for total count, the variation in species richness is perhaps better explained by variation in seasonal populations (or local weather, disturbance or other factors) rather than tidal state. Numbers of species across tidal state are varied however with number of waterbird species varying from seven to thirteen species, with December being the most species diverse.

Table 3. The total count and species richness of all waterbird numbers per month.

	October	November	December	January	February
Metric	High Tide	Low Tide	Low Tide	High Tide	Low Tide
Total count	217	438	749	184	172
Total count (excluding Laridae)	212	336	657	161	104
Species richness	7	9	13	11	11

3.2.3 Bird Counts in Relation to the Severn Estuary SPA and Ramsar Sites

No qualifying species were recorded as listed under the Severn Estuary SPA or Ramsar site. Lesser black-backed gull was recorded on site, however this species is listed as a species identified for possible future consideration and if furthermore noted only as a breeding season species.

3.2.3.1 Assemblage Features

Assemblage counts of waterbird species, as a feature of the Severn Estuary SPA and Ramsar site are shown in Table 3. Peak counts of waterbirds was greatest in December, where 749 waterbirds were seen. This count represents:

- 1.10 % of the SPA population, based upon 5-year peak mean of 68,026 individuals (1988/9 – 1992/3); and
- 1.06 % of the Ramsar population, based upon 5-year peak mean of 70,919 (1988/9 – 1992/3).

These numbers also include gull species, which could be excluded from the total count. With removal of gull species, the peak count is still in December with a total of 657 individuals. This count represents:

- 0.97 % of the SPA population, based upon 5-year peak mean of 68,026 individuals (1988/9 – 1992/3); and
- 0.93 % of the Ramsar population, based upon 5-year peak mean of 70,919 (1988/9 – 1992/3).

None of the other months had counts of waterbirds (including or excluding gulls) greater than 1% of the SPA or Ramsar population, suggesting that high counts are relatively infrequent.

3.2.4 Bird Counts in Relation to the Severn Estuary SSSI

The assemblage feature total is cited as 44,000 birds. As in Section 4.3.2.1, peak counts of waterbirds was greatest in December, where 749 waterbirds were seen. This count represents 1.70 % of the SSSI population. Excluding gulls, this percentage decreases to 1.49 % of the SSSI population.

3.2.5 BTO WeBS Report Alert Species

The only species which the BTO Wetland Bird Survey (WeBS) results show a high alert status for is pochard *Aythya ferina*. Pochard has shown a 100% decrease in the short and long term. Pochard is noted as a feature of consideration for the Severn Estuary SSSI. The 100% decrease represent a change in pochard abundance between 1991/1992 and the reference winter, which was 2016/2017. No features of the Severn Estuary SPA were recorded and which are noted as of medium or high alert status by the BTO WeBS data.

3.2.6 Birds of Conservation Concern

3.2.6.1 Red-Listed

Nine target species were recorded on either (or both) of the Welsh Red and British Red List (Appendix D). These species and a summary of their occurrence are listed below:

1. Pochard, two individuals observed on the water in December.
2. Scaup, single birds in December and January on the water.
3. Goldeneye, two individuals in December on the water.
4. Black-headed gull *Chroicocephalus ridibundus*, records of birds in all months mostly on the water with a single record inland.
5. Herring gull *Larus argentatus*, records of birds in all months mostly on the water with a single record inland.
6. Lesser black-backed gull, records of birds in November, January, February and March mostly on the water with two records inland.
7. Kestrel *Falco tinnunculus*, a single bird flying over the water in October.
8. Starling *Sturnus vulgaris*, a single record of two birds in January to the north of the site.
9. House sparrow, three records of birds in bushes to the north of the site in January to March.

3.2.6.2 Amber-Listed

Fifteen target species were recorded on both the Welsh Amber and British Amber List. These species and a summary of their occurrence are listed below:

1. Mallard, records of birds in all months on the water.
2. Scaup, as described in Section 4.2.6.1.
3. Goldeneye, as described in Section 4.2.6.1.
4. Moorhen *Gallinula chloropus*, two records of single birds in December and January on the water.
5. Coot *Fulica atra*, records of birds in variable numbers in all months on the water
6. Black-headed gull, as described in Section 4.2.6.1.
7. Mediterranean gull *Ichthyaetus melanocephalus*, single bird in March on the southern side of the River Ely.
8. Common gull *Larus canus*, a single individual recorded on the water in March.
9. Lesser black-backed gull, as described in Section 4.2.6.1.
10. Kestrel, as described in Section 4.2.6.1.
11. Song thrush *Turdus philomelos*, two single individuals in January and February on land near the water's edge.
12. House sparrow, as described in Section 4.2.6.1.

13. Dunnock, two single individuals in February.
14. Lesser redpoll *Acanthis cabaret*, a single individual in January.
15. Reed bunting, three individuals in February in open grassland near the water's edge.

3.2.6.3 *Section 7 Species*

Nine target species were listed on Section 7: black-headed gull, herring gull, kestrel, house sparrow, dunnoek, starling, song thrush, lesser redpoll and reed bunting. Summary information on these species is provided above.

4. Conclusions and Recommendations

Six surveys were conducted over the 2022/2023 winter, from October 2022 to March 2023.

A total of 26 target species were recorded during the winter bird surveys; five species of gull, eight species of Anseriformes (ducks, geese and swans), and 13 other species, including Section 7 species.

Nine target species were recorded on either (or both) of the Welsh Red and British Red List. Fifteen target species were recorded on both the Welsh Amber and/or British Amber List. Nine target species were listed on Section 7. The majority of the target species observations were located on the water of Cardiff Bay.

No qualifying species were recorded as listed under the Severn Estuary SPA or Ramsar site. Peak counts of assemblage features were approximately 1% of the SPA and Ramsar population, and 1.7% of the Severn Estuary SSSI. Excluding gulls from these totals, reduces the assemblage population percentage.

4.1 Recommendations

Any impact from the proposed works on features of designated sites, e.g. wintering birds, should be evaluated as part of the project level Ecological Impact Assessment (or Environmental Impact Assessment, depending upon scope of redevelopment) to support the planning application following appropriate guidelines²⁰.

Any proposed works should be considered within a Habitats Regulations Assessment to assess the potential impact on European designated sites, and any functionally linked habitat, e.g. Cardiff Bay.

Discussion with NRW is advised to determine whether gulls are conclusively considered as part of the waterbird assemblage.

It is recommended that habitat retention, protection and, if necessary, replacement and enhancement measures, are implemented during the design process. Measures to ensure avoidance of disturbance to waterbirds on Cardiff Bay is recommended, both during construction and operation. Furthermore, standard construction mitigation should be adopted following best practice guidance, avoiding disturbance and loss of habitat to wintering birds, where possible.

It is recommended that there is consultation with statutory bodies, i.e. Local Planning Authority and NRW, to define the potential scale of impact on wintering birds, in relation to the designated sites.

²⁰ CIEEM, 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Second Edition. CIEEM, Winchester.

Appendix A

Figures

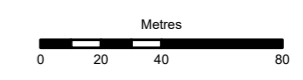
A.1 Red-Line Boundary



Legend

- Redline Boundary
- Updated Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
Rev	Date	By	Chkd	Appd	Authd



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Project Name
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Drawing Title
Site Red Line Boundary

Scale at A3
1:2,500

Role

Suitability
For Issue

Project Number 288353-03	Rev P01
------------------------------------	-------------------

Drawing Number
Figure 1

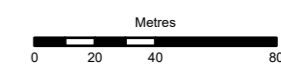
A.2 Transect Route October - February



Legend

- Redline Boundary
- Transect Route 1

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
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Project Name
Cardiff International Sport Village

Drawing Title
**Transect Route -
October - February**

Scale at A3
1:2,500

Role

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Suitability

For Issue

Project Number
288353-03

Rev
P01

Drawing Number
Figure 2

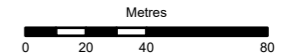
A.3 Transect Route March



Legend

- Updated Redline Boundary
- Transect Route 2

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
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**Transect Route -
March**

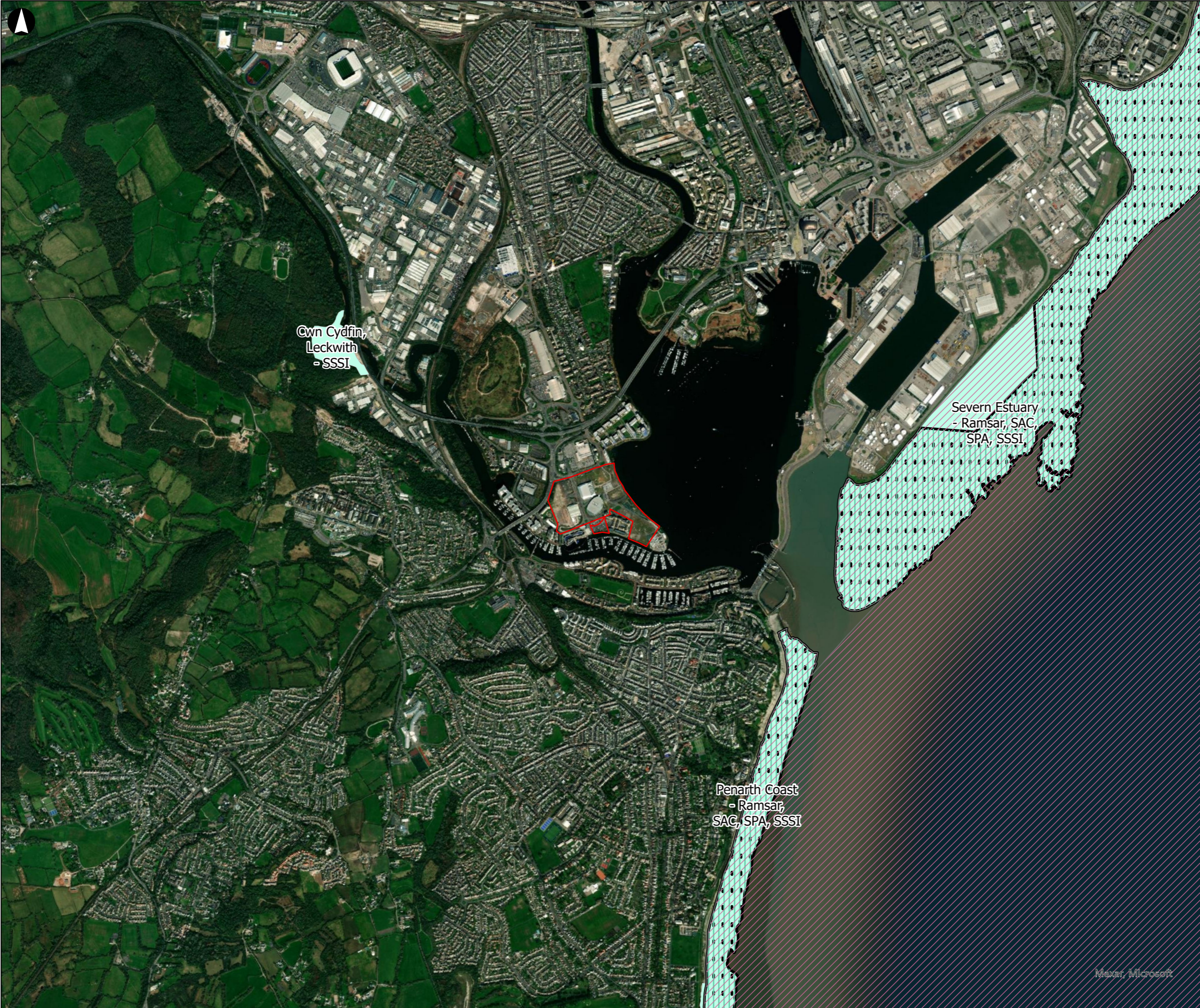
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Role
For Issue

Project Number 288353-03	Rev P01
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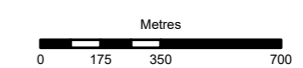
Drawing Number
Figure 3

A.4 Statutory Designated Sites



- Legend**
- Ramsar
 - SAC
 - SPA
 - SSSI
 - Updated Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
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Drawing Title
Statutory Designated Sites

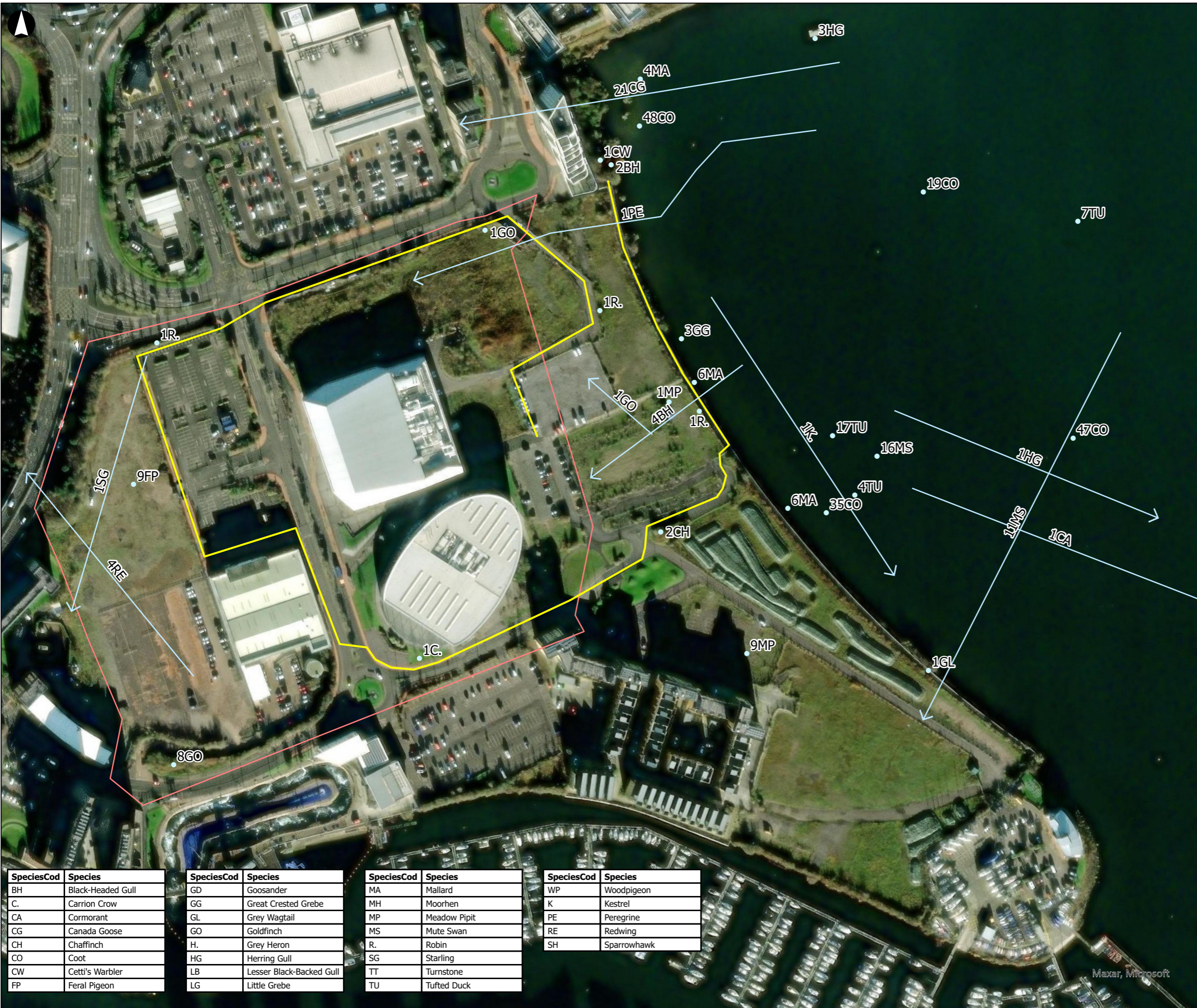
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Role
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Suitability
For Issue

Project Number 288353-03	Rev P01
Drawing Number Figure 4	

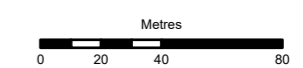
Maxar, Microsoft

A.5 October Survey Results



- Legend**
- Transect Route 1
 - Survey - Flightline
 - Survey - Point
 - Redline Boundary

Coordinate System: British National Grid



P01	04/06/2023	SH	AC	PC	--
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Drawing Title
**Monthly Bird Survey Results :
October**

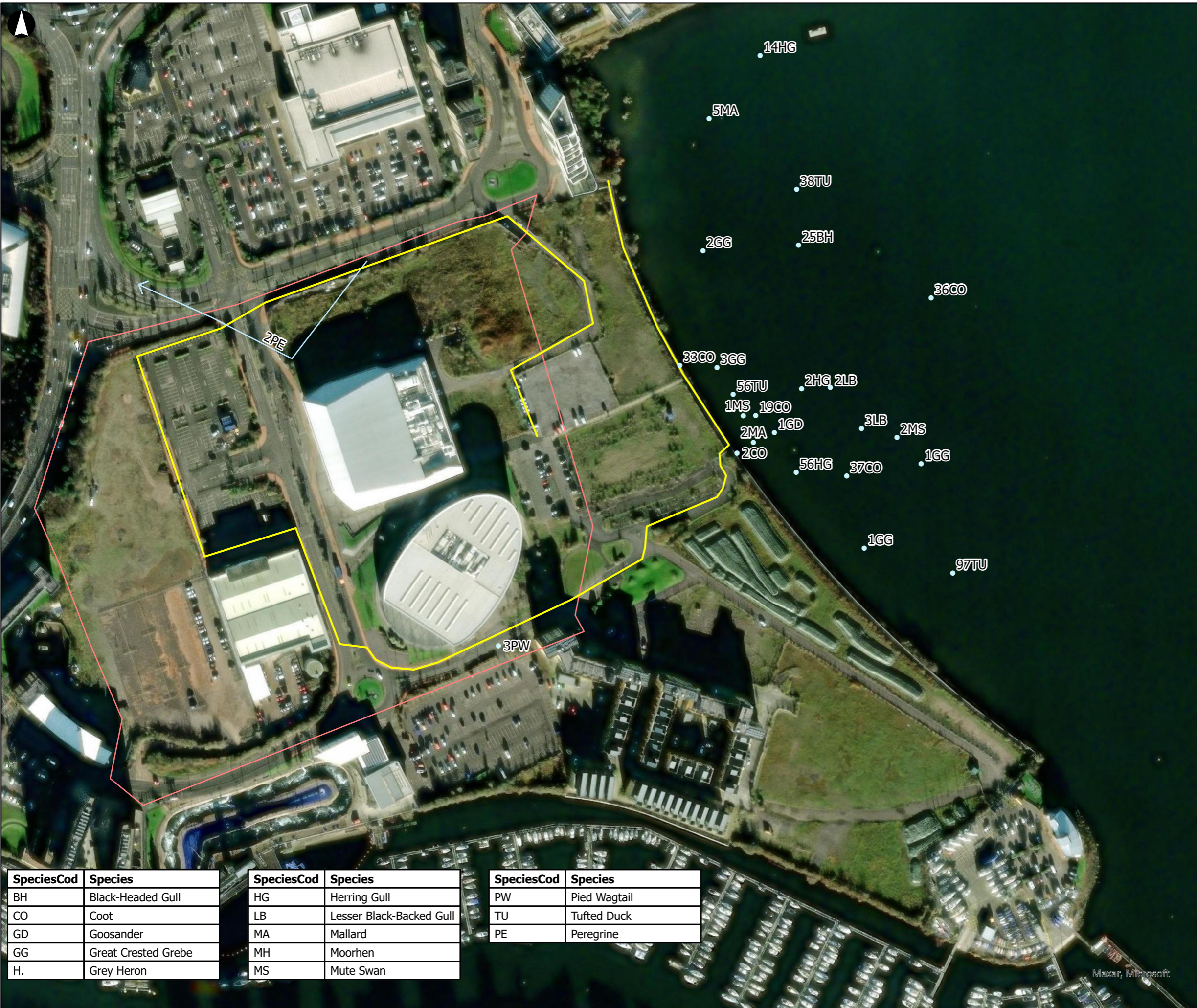
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For Issue

Project Number 288353-03	Rev P01
Drawing Number Figure 5	

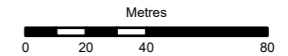
SpeciesCod	Species	SpeciesCod	Species	SpeciesCod	Species	SpeciesCod	Species
BH	Black-Headed Gull	GD	Goosander	MA	Mallard	WP	Woodpigeon
C.	Carion Crow	GG	Great Crested Grebe	MH	Moorhen	K	Kestrel
CA	Cormorant	GL	Grey Wagtail	MP	Meadow Pipit	PE	Peregrine
CG	Canada Goose	GO	Goldfinch	MS	Mute Swan	RE	Redwing
CH	Chaffinch	H.	Grey Heron	R.	Robin	SH	Sparrowhawk
CO	Coot	HG	Herring Gull	SG	Starling		
CW	Cetti's Warbler	LB	Lesser Black-Backed Gull	TT	Turnstone		
FP	Feral Pigeon	LG	Little Grebe	TU	Tufted Duck		

A.6 November Survey Results



- Legend**
- Transect Route 1
 - Survey - Flightline
 - Survey - Point
 - Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
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Drawing Title
**Monthly Bird Survey Results :
November**

Scale at A3
1:2,500

Role

For Issue	
Project Number 288353-03	Rev P01
Drawing Number Figure 6	

SpeciesCod	Species
BH	Black-Headed Gull
CO	Coot
GD	Goosander
GG	Great Crested Grebe
H.	Grey Heron

SpeciesCod	Species
HG	Herring Gull
LB	Lesser Black-Backed Gull
MA	Mallard
MH	Moorhen
MS	Mute Swan

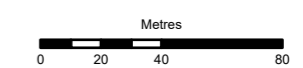
SpeciesCod	Species
PW	Pied Wagtail
TU	Tufted Duck
PE	Peregrine

A.7 December Survey Results



- Legend**
- Transect Route 1
 - Survey - Flightline
 - Survey - Point
 - Redline Boundary

Coordinate System: British National Grid



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Drawing Title
**Monthly Bird Survey Results :
December**

Scale at A3
1:2,500

Suitability
For Issue

Project Number 288353-03	Rev P01
Drawing Number Figure 7	

SpeciesCod	Species
B.	Blackbird
BH	Black-Headed Gull
CA	Cormorant
CO	Coot
GD	Goosander
GG	Great Crested Grebe
GL	Grey Wagtail
GN	Goldeneye

SpeciesCod	Species
GO	Goldfinch
HG	Herring Gull
LB	Lesser Black-Backed Gull
LG	Little Grebe
LT	Long-Tailed Tit
M.	Mistle Thrush
MA	Mallard
MG	Magpie

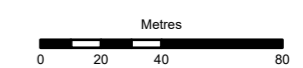
SpeciesCod	Species
MH	Moorhen
MS	Mute Swan
PO	Pochard
R.	Robin
SP	Scaup
TU	Tufted Duck

A.8 January Survey Results



- Legend**
- Transect Route 1
 - Survey - Flightline
 - Survey - Point
 - ▭ Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
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Drawing Title
**Monthly Bird Survey Results :
January**

Scale at A3
1:2,500

Suitability
For Issue

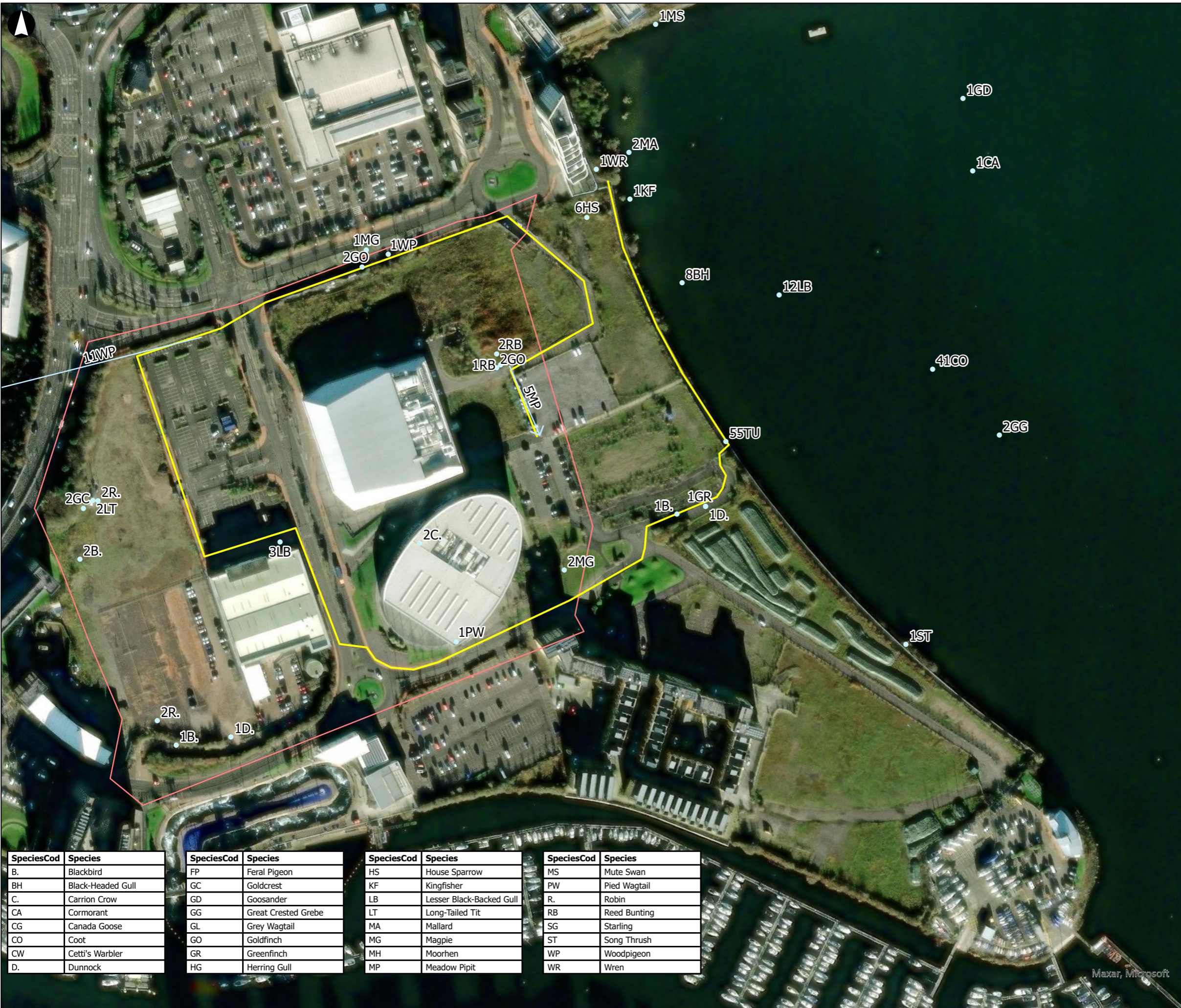
Project Number 288353-03	Rev P01
Drawing Number Figure 8	

SpeciesCod	Species
BH	Black-Headed Gull
CA	Cormorant
CG	Canada Goose
CO	Coot
GD	Goosander
GG	Great Crested Grebe
GL	Grey Wagtail
GR	Greenfinch

SpeciesCod	Species
HG	Herring Gull
HS	House Sparrow
LB	Lesser Black-Backed Gull
LR	Redpoll
LT	Long-Tailed Tit
MA	Mallard
MH	Moorhen
MP	Meadow Pipit

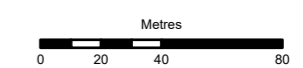
SpeciesCod	Species
MS	Mute Swan
SG	Starling
SP	Scaup
ST	Song Thrush
TT	Turnstone
TU	Tufted Duck

A.9 February Survey Results



- Legend**
- Transect Route 1
 - Survey - Flightline
 - Survey - Point
 - Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
Rev	Date	By	Chkd	Appd	Authd



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Drawing Title
**Monthly Bird Survey Results :
February**

Scale at A3
1:2,500

For Issue
Project Number
288353-03
Drawing Number
Figure 9

Rev
P01

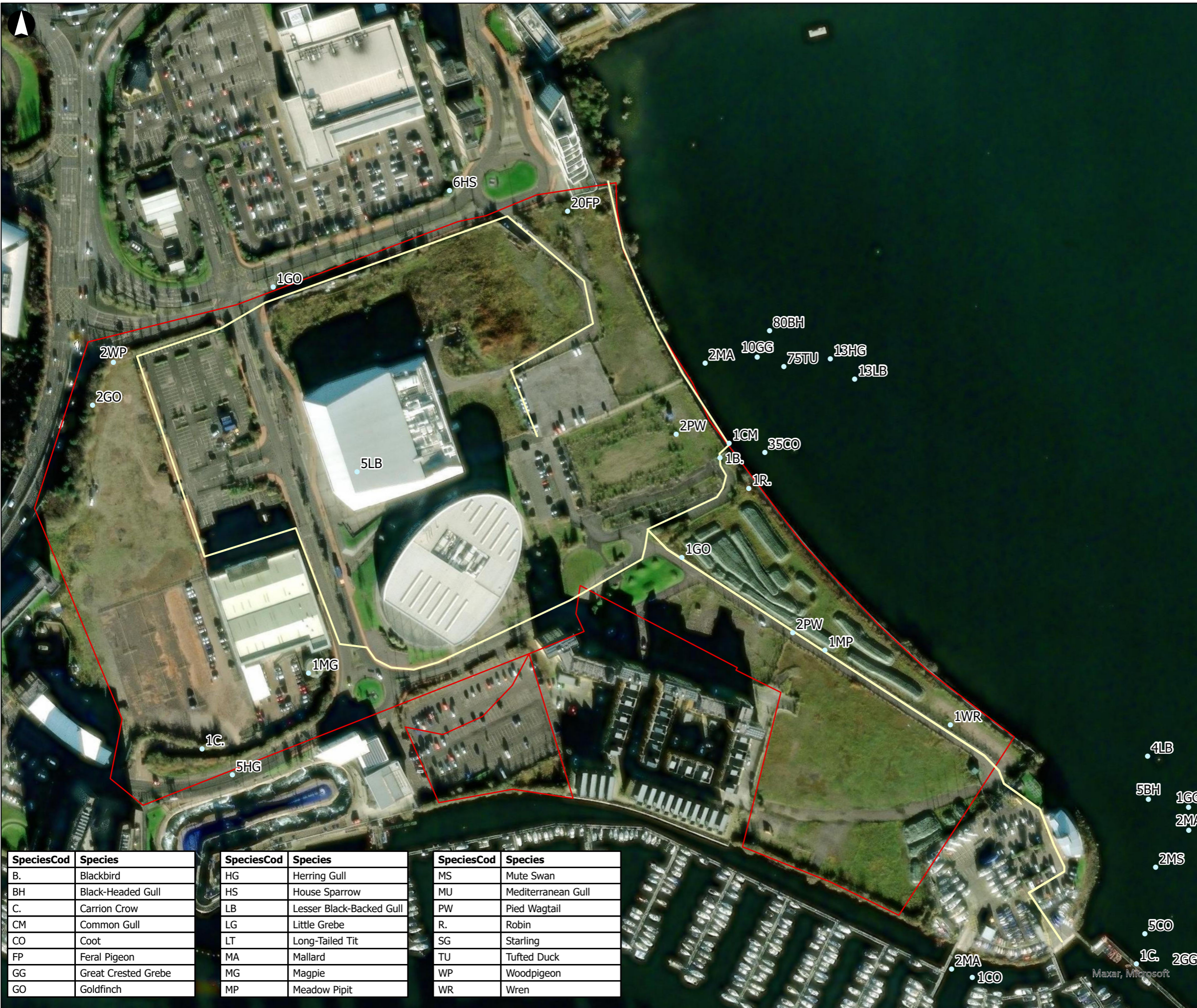
SpeciesCod	Species
B.	Blackbird
BH	Black-Headed Gull
C.	Carrion Crow
CA	Cormorant
CG	Canada Goose
CO	Coot
CW	Cetti's Warbler
D.	Dunnock

SpeciesCod	Species
FP	Feral Pigeon
GC	Goldcrest
GD	Goosander
GG	Great Crested Grebe
GL	Grey Wagtail
GO	Goldfinch
GR	Greenfinch
HG	Herring Gull

SpeciesCod	Species
HS	House Sparrow
KF	Kingfisher
LB	Lesser Black-Backed Gull
LT	Long-Tailed Tit
MA	Mallard
MG	Magpie
MH	Moorhen
MP	Meadow Pipit

SpeciesCod	Species
MS	Mute Swan
PW	Pied Wagtail
R.	Robin
RB	Reed Bunting
SG	Starling
ST	Song Thrush
WP	Woodpigeon
WR	Wren

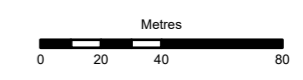
A.10 March Survey Results



Legend

- Transect Route 2
- Survey - Point
- Updated Redline Boundary

Coordinate System: British National Grid



P01	06/04/2023	SH	AC	PC	--
Rev	Date	By	Chkd	Appd	Authd



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Client
Cardiff Council

Project Name
Cardiff International Sport Village

Drawing Title
**Monthly Bird Survey Results :
March**

Scale at A3
1:2,500

Suitability For Issue	
Project Number 288353-03	Rev P01
Drawing Number Figure 10	

SpeciesCod	Species	SpeciesCod	Species	SpeciesCod	Species
B.	Blackbird	HG	Herring Gull	MS	Mute Swan
BH	Black-Headed Gull	HS	House Sparrow	MU	Mediterranean Gull
C.	Carrion Crow	LB	Lesser Black-Backed Gull	PW	Pied Wagtail
CM	Common Gull	LG	Little Grebe	R.	Robin
CO	Coot	LT	Long-Tailed Tit	SG	Starling
FP	Feral Pigeon	MA	Mallard	TU	Tufted Duck
GG	Great Crested Grebe	MG	Magpie	WP	Woodpigeon
GO	Goldfinch	MP	Meadow Pipit	WR	Wren

Appendix B

Weather Conditions

B.1 Weather Conditions

Date	Tidal State	Start Time	End Time	High Tide	Low Tide	Sunrise / Sunset	Wind Speed (Beaufort Scale)	Precipitation (0 - none to 4 - heavy rain/snow)	Cloud cover (oktas)	Visibility (0 - <1km, 1 - 1-3km, 2 - >3km)	Temp (°C)
26/10/2022	High Tide	07:55	09:15	08:17	-	07:55 – 17:57	3	0	6	500-1000m	16
24/11/2022	Low Tide	12:54	13:47	-	13:20	07:45 – 16:13	4	4	8	500-1000m	11
22/12/2022	Low Tide	13:47	14:47		12:18	08:15 – 16:06	3	2	8	500-1000m	12
24/01/2023	High Tide	08:25	09:27	08:47	-	08:01 – 16:47	0	0	0	500-1000m	-1
16/02//2023	Low Tide	08:08	09:08	-	09:20	07:24 – 17:28	2	4	8	100-500m	9
14/03/2023	Mid Tide	14:16	15:16	10:56	16:50	06:29 – 18:14	4	0	3	500-1000m	12

Appendix C

Winter Bird Survey Results – Target Species

C.1 Winter Bird Survey Results – Peak Counts of Target Species

For clarity, the more diverse/notable taxonomic groups are coloured: for Anseriformes; and for gulls. Peak counts for each species across the surveys are marked in bold. Parentheses indicate peak counts of birds in flight.

Species	Visit 1 - October	Visit 2 - November	Visit 3 - December	Visit 4 - January	Visit 5 - February	Visit 6 - March
Canada goose	(21)			4		
Mute swan	16 (11)	3	2		1	2
Mallard	16	7	2	4	2	6
Pochard			2			
Tufted duck	28	191	413	43	55	75
Scaup			1			
Goldeneye			2			
Goosander		1			1	
Moorhen			1	1		
Coot	149	127	228	104	41	40
Little grebe			1			
Great crested grebe	3	7	5	3	3	13
Black-headed gull	(4)					
Mediterranean gull						1
Common gull						1
Herring gull	3 (1)	72	63 (15)	10	45	18
Lesser black-backed gull		5	18	2	15	22



Species	Visit 1 - October	Visit 2 - November	Visit 3 - December	Visit 4 - January	Visit 5 - February	Visit 6 - March
Cormorant	(1)			1	1	
Kingfisher					1	
Kestrel	(1)					
Starling	(1)			2		
Song thrush				1	1	
House sparrow				5	6	6
Dunnock					1	
Lesser redpoll				1		
Reed bunting					3	

Appendix D

Conservation Status of Winter Bird Species

D.1 Conservation Status of Winter Bird Species

Vernacular Name	Scientific Name	BTO Code	Birds of Conservation Concern Status – Great Britain*	Birds of Conservation Concern Status – Wales**	Section 7
Canada goose	<i>Branta canadensis</i>	CG			
Mute swan	<i>Cygnus olor</i>	MS			
Mallard	<i>Anas platyrhynchos</i>	MA	Amber		
Pochard	<i>Aythya ferina</i>	PO	Red	Red	
Tufted duck	<i>Aythya fuligula</i>	TU			
Scaup	<i>Aythya marila</i>	SP	Red	Amber	
Goldeneye	<i>Bucephala clangula</i>	GN	Red	Amber	
Goosander	<i>Mergus merganser</i>	GD			
Woodpigeon	<i>Columba palumbus</i>	WP		Amber	
Moorhen	<i>Gallinula chloropus</i>	MH	Amber		
Coot	<i>Fulica atra</i>	CO		Amber	
Little grebe	<i>Tachybaptus ruficollis</i>	LG			
Great crested grebe	<i>Podiceps cristatus</i>	GG			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	BH	Amber	Red	S7
Mediterranean gull	<i>Ichthyaetus melanocephalus</i>	MU	Amber	Amber	
Common gull	<i>Larus canus</i>	CM	Amber	Amber	
Herring gull	<i>Larus argentatus</i>	HG	Red	Red	S7
Lesser black-backed gull	<i>Larus fuscus</i>	LB	Amber	Red	
Cormorant	<i>Phalacrocorax carbo</i>	CA			
Sparrowhawk	<i>Accipiter nisus</i>	SH	Amber		
Kingfisher	<i>Alcedo atthis</i>	KF			
Kestrel	<i>Falco tinnunculus</i>	K.	Red	Amber	S7
Starling	<i>Sturnus vulgaris</i>	SG	Red	Red	S7

Vernacular Name	Scientific Name	BTO Code	Birds of Conservation Concern Status – Great Britain*	Birds of Conservation Concern Status – Wales**	Section 7
Blackbird	<i>Turdus merula</i>	B.			
Song thrush	<i>Turdus philomelos</i>	ST		Amber	S7
Redwing	<i>Turdus iliacus</i>	RE		Amber	
Mistle thrush	<i>Turdus viscivorus</i>	M.	Red	Amber	
Robin	<i>Erithacus rubecula</i>	R.			
House sparrow	<i>Passer domesticus</i>	HS	Amber	Red	S7
Dunnock	<i>Prunella modularis</i>	D.	Amber	Amber	S7
Grey wagtail	<i>Motacilla cinerea</i>	GL	Amber	Amber	
Pied wagtail	<i>Motacilla alba</i> ssp. <i>yarelli</i>	PW			
Meadow pipit	<i>Anthus pratensis</i>	MP	Red	Amber	
Chaffinch	<i>Fringilla coelebs</i>	CH	Amber		
Greenfinch	<i>Chloris chloris</i>	GR	Red	Red	
Lesser redpoll	<i>Acanthis cabaret</i>	LR	Amber		S7
Goldfinch	<i>Carduelis carduelis</i>	GO			
Reed bunting	<i>Emberiza schoeniclus</i>	RB		Amber	S7
Peregrine	<i>Falco peregrinus</i>	PE			
Magpie	<i>Pica pica</i>	MG		Amber	
Carrion crow	<i>Corvus corone</i>	C.			
Cetti's warbler	<i>Cettia cetti</i>	CW			
Long-tailed tit	<i>Aegithalos caudatus</i>	LT			
Goldcrest	<i>Regulus regulus</i>	GC	Red		
Wren	<i>Troglodytes troglodytes</i>	WR		Amber	
Feral pigeon	<i>Columba livia domestica</i>	FP			

* Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747

** Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. and Taylor, R.C., 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus: the Journal of the Welsh Ornithological Society.