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Appropriate Assessment Screening for a proposed development within the Clonburris South West Development Area of the Clonburris SDZ Planning Scheme 2019 at Clonburris, Co. Dublin.

29th November 2021

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On behalf of: Cairn Homes Properties Ltd.

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Table of Contents

Introduction

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more European sites (Special Areas of Conservation (SAC) or Special Protection Areas (SPA)).

The following Appropriate Assessment (AA) (Screening Stage) has been prepared by **Altemar Ltd.** at the request of Cairn Homes Properties Ltd. The project relates to an application for planning permission for a proposed development located within the South West Development Area of the Clonburris SDZ Planning Scheme 2019 at Clonburris, Co. Dublin.

The AA Screening stage examines the likely significant effects of the proposed development, either on its own, or in combination with other plans and projects, upon a European site and considers whether, on the basis of objective scientific evidence, it can be concluded, in view of best scientific knowledge and the conservation objectives of the relevant European sites, that there are not likely to be significant effects on any European site.

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments. Bryan Deegan is the managing director of Altemar. Bryan is an environmental scientist and marine biologist with 26 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

Background to the Appropriate Assessment

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 "habitat types" which are of European importance. In the Habitats Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (NATURA, 2000). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive), Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [NATURA 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

As outlined in "Managing European sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" (European Commission, 21 November 2018) *"The purpose of the appropriate assessment is to assess the implications of the plan or project in respect of the site's conservation objectives, either individually or in combination with other plans or projects. The conclusions should enable the competent authorities to ascertain whether the plan or project will adversely affect the integrity of the site concerned. The focus of the appropriate assessment is therefore specifically on the species and/or the habitats for which the European site is designated."*

As outlined in the EC guidance document on Article 6(4) (January 2007)[1]:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field.

Assessment procedures of plans or projects likely to affect European sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
    - *Structure and function, and the respective role of the site's ecological assets;*
    - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
    - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
    - *Role of the site within the biographical region and in the coherence of the European network; and,*
    - *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the European assets which must also be useful to monitor the plan or project implementation."*

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[1] European Commission. (2007).Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;

Stages of the Appropriate Assessment

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011. In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

1) Screening stage:

   - Description of plan or project, and local site or plan area characteristics;
   - Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives
   - Identification and description of individual in combination effects likely to result from the proposed project;
   - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,

     Conclusions

2) Appropriate Assessment (Natura Impact Statement):

   - Description of the European sites that will be considered further;
   - Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan; and,
   - Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts
   - Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"
   - Conclusions.

If it can be demonstrated during the AA screening phase (Stage 1), that the proposed project will not have a significant effect, whether alone or in combination with other plans or projects, on the conservation objectives of a Natura 2000 site, then no further AA (Stage 2) will be required. It is important to note that there is a requirement to apply a precautionary approach to AA screening. Therefore, where effects are possible, certain or unknown at the screening stage, AA will be required.

In addition, it should be noted that Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an AA of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.

Stage 1 Screening Assessment

Description of the Proposed Project

Cairn Homes Properties Ltd. intends to seek planning permission for a proposed development of the Clonburris South West Development Area of the Clonburris SDZ Planning Scheme 2019 at Clonburris, Co. Dublin.

The development will consist of the construction of 569 dwellings, a creche, innovation hub and open space in the Clonburris South West Development Area of the Clonburris SDZ Planning Scheme 2019 as follows:

A) 173 no. houses comprising 8 no. 2 bedroom houses, 153 no. 3 bedroom houses and 12 no. 4 bedroom houses (147 no. dwellings in CSW-S4 consisting of 8 no. 2 bedroom houses, 127 no. 3 bedroom houses & 12 no. 4 bedroom houses & 26 no. 3 bedroom dwellings in CSW-S3); all 2 no. storey comprising semi-detached, terraced, end terrace units (with parking and private open space);

B) 148 no. duplex apartments/apartments (88 no. in CSW-S4 & 60 no. in CSW-S3) comprising 74 no. 2 bedroom units and 74 no. 3 bedroom units, in 16 no. 3 no. storey buildings. In CSW-S4 Duplex Blocks A,B,C,D,E,F,G,J,K, comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Duplex Block H comprises 16 no. units (8 no. 2 bed & 8 no. 3 bed units); In CSW-S3 Blocks L, N & O comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Block M comprises 14 no. units (7 no. 2 bed & 7 no. 3 bed units), Block P comprises 10 no. units (5 no. 2 bed & 5 no. 3 bed units), Block Q comprises 12 no. units (6 no. 2 bed & 6 no. 3 bed units), all to have terraces;

C) 396 no. apartments as follows: within CSW-S4, Block 1 consists of 172 no. apartments (76 no. 1 bedroom, 91 no. 2 bedroom and 5 no. 3 bedroom apartments), in a 2-building arrangement both 6 no. storeys in height. Within CSW-S3, Block 2 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments, Block 3 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments (all apartments to have terrace or balcony).

D) Provision of an innovation hub (626 sq. m) and creche (c. 547 sq. m) in a part 3/4 storey *'local node'* building in CSW-S4;

E) Vehicular access will be from the permitted Clonburris Southern Link Street and R113 to the east (along with provision of internal haul routes (for construction) to connect to the R136 to the west);

F) Public Open Space/landscaping of c. 4.1 hectares (to include Local Park and MUGA in CSW-S3, Grand Canal Park, along the southern and eastern boundaries of the site to connect to existing Grand Canal towpath) as well as a series of communal open spaces to serve apartments and duplex units (c. 0.39 ha).

G) All ancillary development works including footpaths, landscaping boundary treatments, public, private open space areas, car parking (656 no. spaces) and bicycle parking (672 no. spaces), single storey ESB substations/bike/bin stores, and all ancillary site development/construction works;

H) Permission is also sought for revisions to attenuation permitted under SDZ20A/0021 (Surface water attenuation measures and underground attenuation systems) as well as connection to water supply, and provision of foul drainage infrastructure.

The proposed site outline, location, phasing plan, site layout and elevations are demonstrated in Figures 1-7.

Landscape

A Landscape Design Report has been prepared by Murray & Associates to accompany this application. This report outlines the following design strategy for the proposed development site: '*The design intent is to create a high quality and appropriate landscape for future residents, which will meet their recreational needs and provide an attractive visual setting and associated social amenity spaces. The principles of inclusivity for all age groups, universal accessibility and sustainable development are applied to ensure an inclusive and environmentally responsible design solution.*

A restrained palette of materials will also be used to integrate the proposed architectural forms and materials within the landscape.'

The proposed landscape masterplan and landscape plan for Grand Canal Park are demonstrated in Figures 8 & 9.

Figure 1. Site outline and location on satellite imagery (ESRI)

Figure 2. Outline of proposed site.

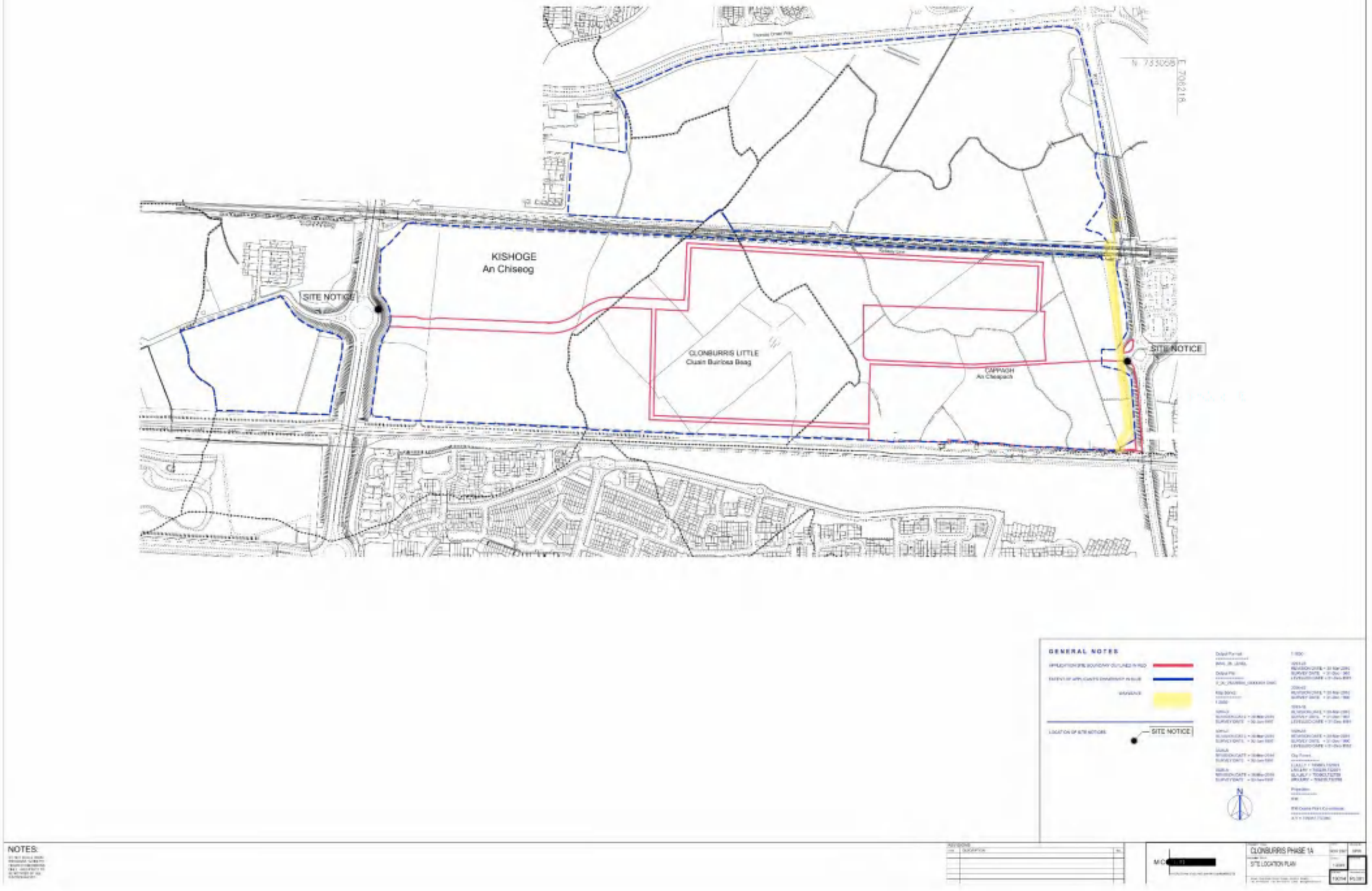


Figure 3. Site location plan

Figure 4. Phasing plan

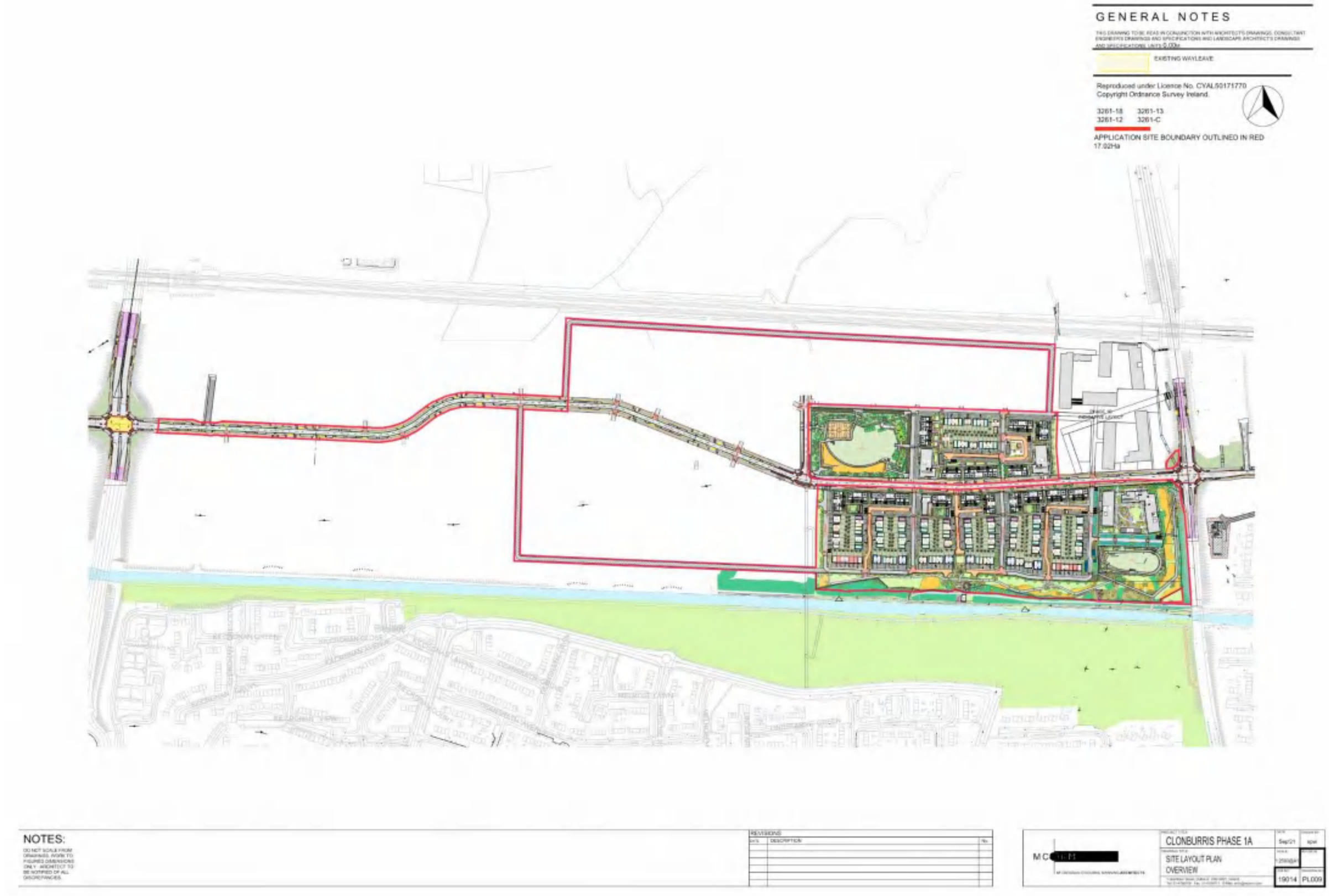
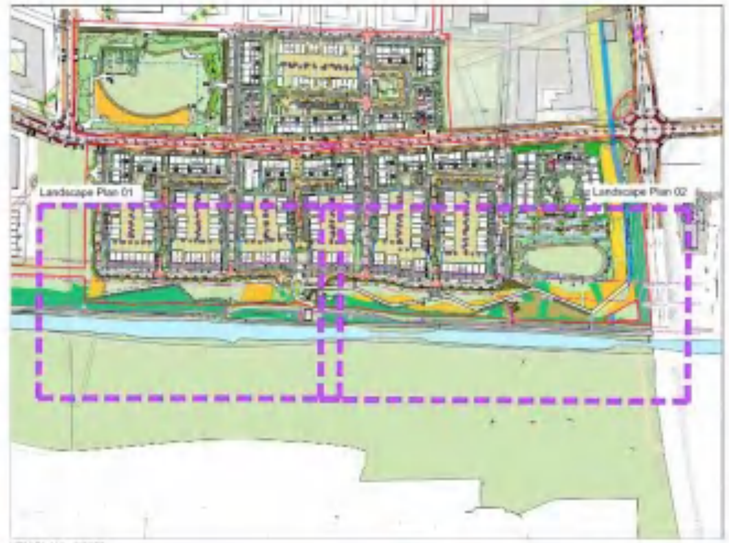


Figure 5. Site layout plan overview

Figure 6. Site layout plan

Figure 7. Contiguous elevations and sections

Landscape Plan 01 1:500



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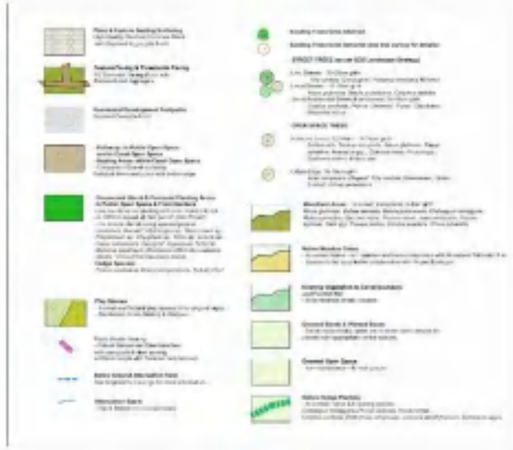


Figure 9. Landscape plan – Grand Canal Park

Surface Water Management Plan

DBFL Consulting Engineers were commissioned to undertake a Surface Water Management Plan (SWMP) for the Clonburris Strategic Development Zone (SDZ) within the administrative area of South Dublin County Council (SDCC). The objective of this report is to develop on the SDZ Surface Water Strategy to identify a strategy and suite of measures which provide robust, effective and economical measures for the management of surface water quality and quantity in the SDZ. This report outlines the following in relation to the Clonburris SDZ that encompasses the subject site:

Topography and Drainage

This report outlines the following in relation to the existing topography and drainage infrastructures for the subject site:

'The topography of the site is reasonably flat. Much of the primary road network bounding the site is situated at a significantly higher level. Site levels outside road embankments and watercourses generally range between 55m – 63m. The majority of the lands are within the Griffeen River Catchment, easternmost areas of the lands drain to the Camac River Catchment.

Topographical surveys and drainage records available from various landholdings within the scheme have been supplemented by additional surveys to create a combined topographical survey to assist in the creation of the SWMP and determination of drainage requirements.

There are a number of existing drainage ditches located throughout the site. These ditches are noted to generally have extremely flat or inconsistent gradients and are poorly maintained. The existing drainage regimes across the site are therefore difficult to accurately determine.'

Figure 2.2: Indicative Existing Topography & Drainage – West of Outer Ring (R136)

West of the Outer Ring Road (which is elevated above surrounding ground) topography generally slopes from south to north with additional local gradients toward the Griffeen River and local drainage ditches.

Figure 2.3: Indicative Existing Topography & Drainage– East of Outer Ring (R136)

Between the elevated Outer Ring (R136) and Fonthill Roads (R113) the lands have a slight central ridge which slopes to the west and east. Western portions generally drain to the west though culverts under the R136 and to the north under Thomas Omer Way. Eastern portions generally drain to the southeast and appear to drain under the R113 and to the east. A canal overflow channel runs alongside the canal towpath north of the canal before re-entering the canal downstream, it does not appear that local drainage connects to this overflow channel.

Portions east of the R113 and south of the railway drain to the southeast and appear to discharge to existing surface water drainage networks.

Portions east of the R113 and north of the railway slope towards the southwest however it is unclear where surface water from these lands outfalls to. It is possible that an existing culvert under the railway exists conveying flows to the portion south of the railway.'

Receiving Surface Water Infrastructure

In relation to the receiving surface water infrastructure, this report outlines the following: '*Surface water runoff from the development of Clonburris SDZ lands will be attenuated and conveyed to the receiving watercourses.*

A review of existing infrastructure was carried out to determine suitable surface outfall points for the SDZ lands. Surface water will need to be either directly discharged to local watercourses or conveyed to watercourses though existing or new stormwater networks. The availability of outfall points influences the surface water catchments and finished levels for the proposed development.

As described in Section 2.2, existing topography was generally towards the northern and eastern boundaries. A summary of potential receiving infrastructure is provided in the following sections.

It is worth noting that both the canal and rail line represent significant physical barriers to the provision of new drainage infrastructure. To install infrastructure to the depths required by Irish Rail /Waterways Ireland would result in pipe depths far deeper than local receiving infrastructure. Therefore strategy options which require new rail or canal pipe crossings have been disregarded. Where existing pipes are present under these assets they may be suitable for incorporation into the proposed network subject to suitable condition and capacity. It is also noted that Waterways Ireland have confirmed that it is not possible to discharge surface water, attenuated or otherwise to the canal or associated overflow channels.

3.1 Griffeen River & Kilmahuddrick Stream

The Griffeen River & Kilmahuddrick Stream flow though the western portion of the SDZ. They are conveyed under the roadway line & Adamstown Avenue via a series of culverts (A-C per Figure 3.1). The culvert invert levels at A & B on the Griffeen River are approximately 54.5m and approximately 54.2 at location C on the Kilmahuddrick Stream. These levels facilitate gravity drainage discharge from all areas in the south of the Railway within the Griffeen Catchment

The proposed link road crosses both the Griffeen River and Kilmahuddrick Stream and new culverts will be required. The Planning Scheme SWS identified that regrading of the Kilmahuddrick Stream channel may be required to facilitate a suitable crossing of the link street and associated services. Based on initial review of link street design and existing levels it is anticipated that this regrading of the stream will be needed. Any works required should be documented in the planning application for the infrastructure and included in OPW Section 50 applications for the culverts.

3.2 Stormwater Networks North

A variety of existing drainage networks are in place north of the SDZ including networks on Thomas Omer Way, Griffeen Avenue and surrounding residential areas. The spine drainage main for this area runs along Griffeen Avenue, Griffeen Road and Griffeen Glen before discharging to the Griffeen River. The pipe size ranges from 1200 to 1500 along the area under consideration.

Existing drainage crossings tying into this network are in place under Thomas Omer Way (E & F per Figure 3.2) however the invert levels at these locations at 56.3m and 57.4m respectively are not conducive to receiving gravity drainage to many parts of the northern SDZ lands. Provision of a new connection to the network further downstream at Griffeen Road (Invert level 52m at approx location D) would offer better compatibility with drainage levels required. Existing open and piped road drainage associated with the R136 is present either side of the R136.

3.3 Stormwater Networks East

A variety of existing drainage networks are in place east of the SDZ including networks on Thomas Omer Way, Ninth Lock Road and surrounding residential areas. The spine drainage main for this area runs along Ninth Lock Road, Moorfield Walk, under the roadway line and along Station Road before discharging to an open watercourse within the industrial estate. This watercourse is a tributary to the Camac River.

There appears to be some discrepancies in the exact route and arrangement of this drainage line between different sources of record information. Small portions of road drainage on Ninth Lock Road also appear to discharge into existing drainage ditches within the SDZ lands

It is noted that some of the existing network is located within SDZ lands and therefore likely to have to be diverted to facilitate development

3.4 Stormwater Networks South-East

Drainage from south eastern portions of the SDZ discharge to existing stormwater networks on Ninth Lock Road at point G per Figure 3.4. The invert level at this location is approximately 55m which is anticipated to also be suitable as a connection point for proposed networks. The drainage run continues south on Ninth Lock Road where it splits into parallel runs along Station Road which later merge and discharge to the open watercourse within the industrial estate.

It is noted that there appears to be discrepancies between SDCC record information and surveyed information in this area. The flow split does not appear to be accurately represented and pipe sizes in records do not appear to match sizes encountered in surveys. For example, some areas show a Ø450mm pipe when a large culvert in excess of 1.5m wide was encountered.'

Surface Water Management Strategy

In relation to the surface water management strategy for the subject site, this report outlines the following:

'4.1 Objectives

The key objectives of the SWMP are to establish a strategy which:

- *Maintains or reduces the existing greenfield runoff rates from the SDZ lands*
- *Minimises the risk of flooding of development lands in the SDZ and Avoids a flood risk increase upstream or downstream of the SDZ*
- *Provides an allowance for the effects of climate change*
- *Implements a treatment train of SuDS measures within the drainage network to improve water quality prior to discharge to receiving watercourses*
- *Establishes the key infrastructural requirements required to implement the surface water management measures in each catchment*
- *Identifies site source control Surface Water Management measures to comply with the overall Masterplan*

4.2 Catchment Definition

Definition of surface water catchments is a key part of the implementation of the SWMP. Catchments have been defined based on existing topography, SDZ development cells and available outfalls. All development lands in the SDZ and all strategic infrastructure are within the catchment extents. Some areas within the SDZ (existing roads / school / Park and Ride) which have existing drainage infrastructure and outfalls are excluded.

This strategy is shown on drawing number 190113-DBFL-SW-ST-DR-C-1101 which outlines each catchment and corresponding main drainage routes and attenuation facilities, an extract is shown in Figure 4.1.

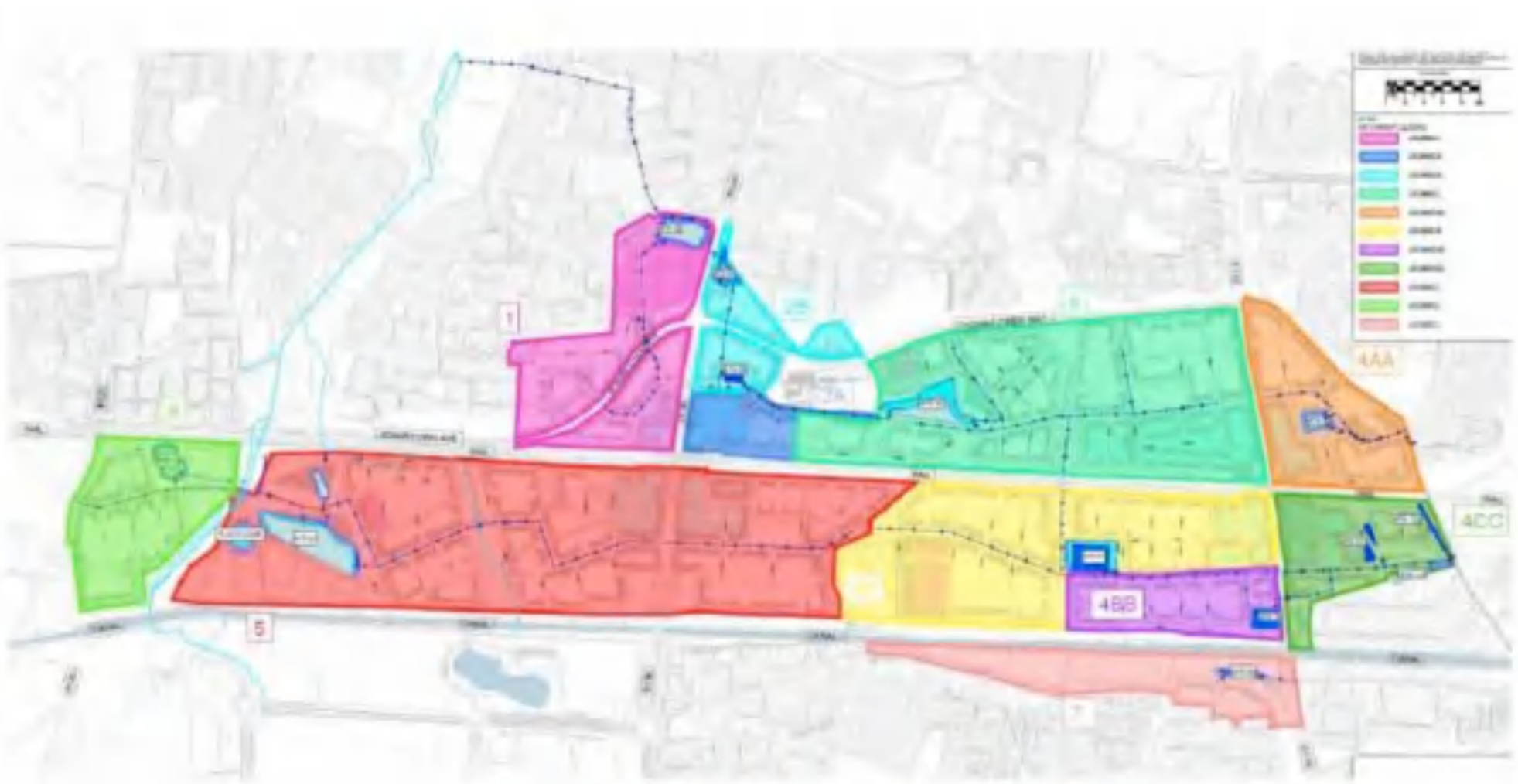


Figure 4.1: Surface Water Catchment Plan

Generally, catchments follow existing topography and drainage paths. One exception is in areas west of the Fonthill Road and north of the railway line which currently drain south to the Camac catchment. These lands will be subject to land raising to direct runoff west towards the Griffeen catchment. This is in line with recommendations in the SDZ SWS to reduce flows to the Camac catchment with the intention of reducing downstream flood risk in that catchment.'

Infrastructure Design Report

An Infrastructure Design Report has been prepared by DBFL Consulting Engineers to accompany this planning application. This report outlines the following proposed surface water drainage strategy for the subject site:

Surface Water

In relation to existing surface water drainage, this report outlines the following:

'The existing site has a gradient towards the northeast as shown in Figure 1-3. There are a number of existing interconnected field drains on the site. These have extremely flat gradients but are understood to drain to existing drainage networks to the east of the site and ultimately to the Camac River. Additional detail on existing drainage within the SDZ is provided in the SWMP. Existing agricultural drainage on site will be maintained as required until it is replaced by drainage networks for the developed site.

Figure 3-1 Existing Drainage (Boundary Indicative)

The south boundary of the subject site is bounded by an overflow channel for the Grand Canal. This channel runs alongside the canal towpath north of the canal before re-entering the canal downstream, it does not appear that local drainage connects to this overflow channel. In order to preserve the Grand Canal ecological corridor development setbacks as defined in the SDZ documents are implemented. These allow for the maintenance of an ecological corroder along the canal, see figure 3.2 below.'

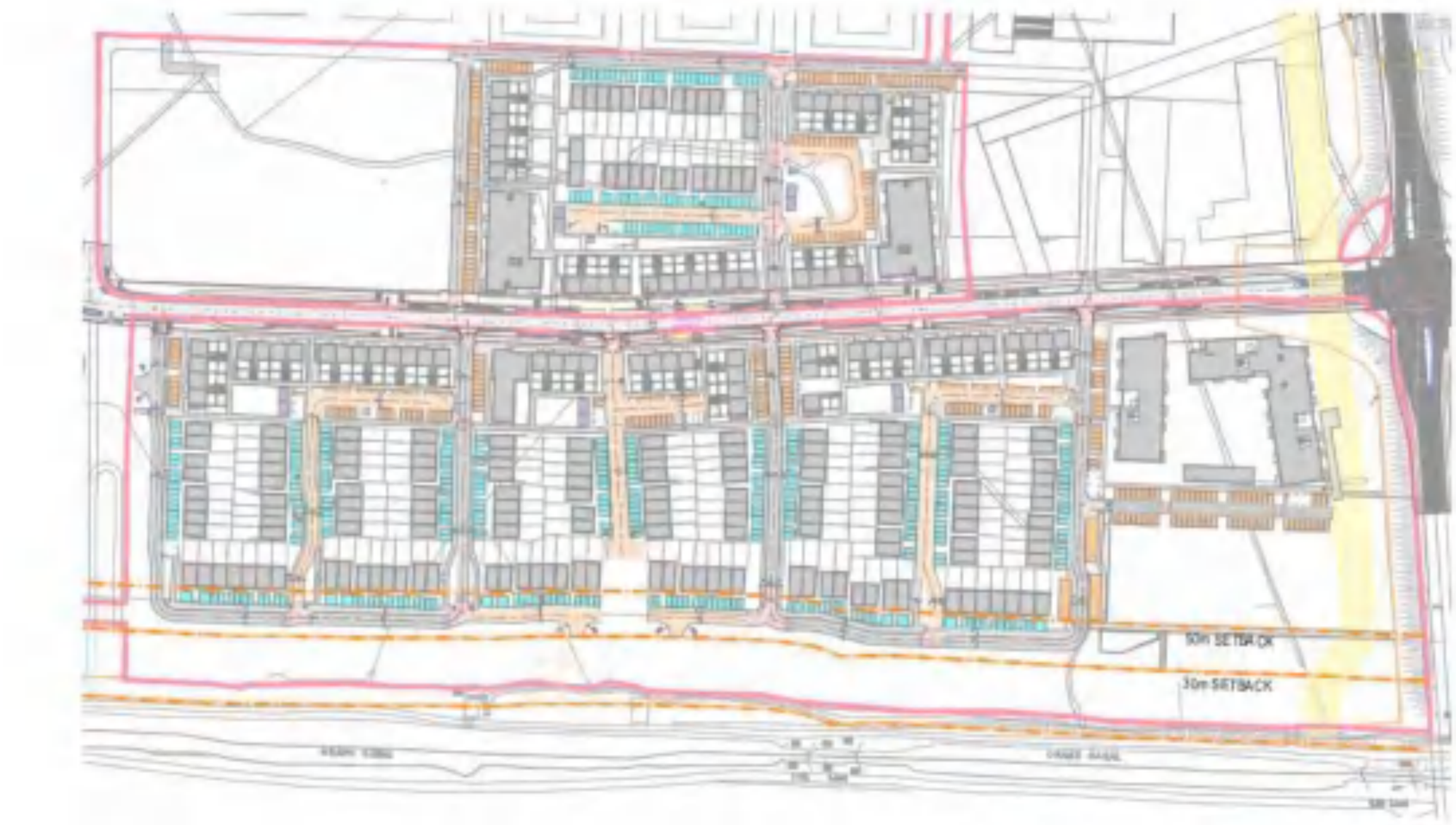


Figure 3-2: Grand Canal ecological corridor and gas main wayleave

In relation to the proposed surface water drainage strategy for the subject site, this report outlinest the following:

'3.2 Surface Water Drainage Strategy

3.2.1 Compliance With SWMP

DBFL Consulting Engineers have undertaken a "Surface Water Management Plan" (SWMP) for the overall Clonburris Strategic Development Zone (SDZ). The SWMP for the SDZ been submitted to SDCC and agreed with SDCC. The SWMP outlines the surface water strategy for the overall SDZ lands and the requirements for each individual site within the SDZ which includes the subject site. The SWMP includes the strategy for attenuation design, SUDS features, run off rates and trunk infrastructure layout. The subject site has been designed in accordance the strategy agreed upon in the SWMP.

The proposed site will benefit from trunk surface water infrastructure proposed as part of the Clonburris Infrastructure Development for which planning was granted under reference SDZ20A/0021. The planning application included trunk surface water sewers and regional attenuation to serve the subject site, this strategic infrastructure aligns with the SWMP proposals and allows for a treatment train of Suds measures within individual sites and within the regional features.

It is intended that the stormwater run-off generated from the proposed development will be collected in a new gravity sewer and discharged to the regional attenuation systems constructed as part of the CSLS. The subject site spans across two separate catchments within the SWMP. The portion of the site to the north of the CSLS is within Catchment 4B and will be served by attenuation ATN 07, south of the Link Street the proposed development is designated as Catchment 4BB and will discharge to attenuation ATN 08 as shown in Figure 3-3. Both attenuation systems will consist of modular underground storage with over ground detention basins. Outflow from each attenuation structure within the SDZ limit flow to a rate of 3.1 l/s/ha as detailed in the SWMP for the SDZ.

The subject development application has been coordinated with the Clonburris CSLS application and therefore no significant alterations are proposed to the layout or design of the surface water infrastructure under planning reference SDZ20A/0021. Minor modifications to the footprints of the attenuation areas are proposed as part of this application however the general arrangement and attenuation volumes are to be maintained as per those permitted as part of the CSLS application.

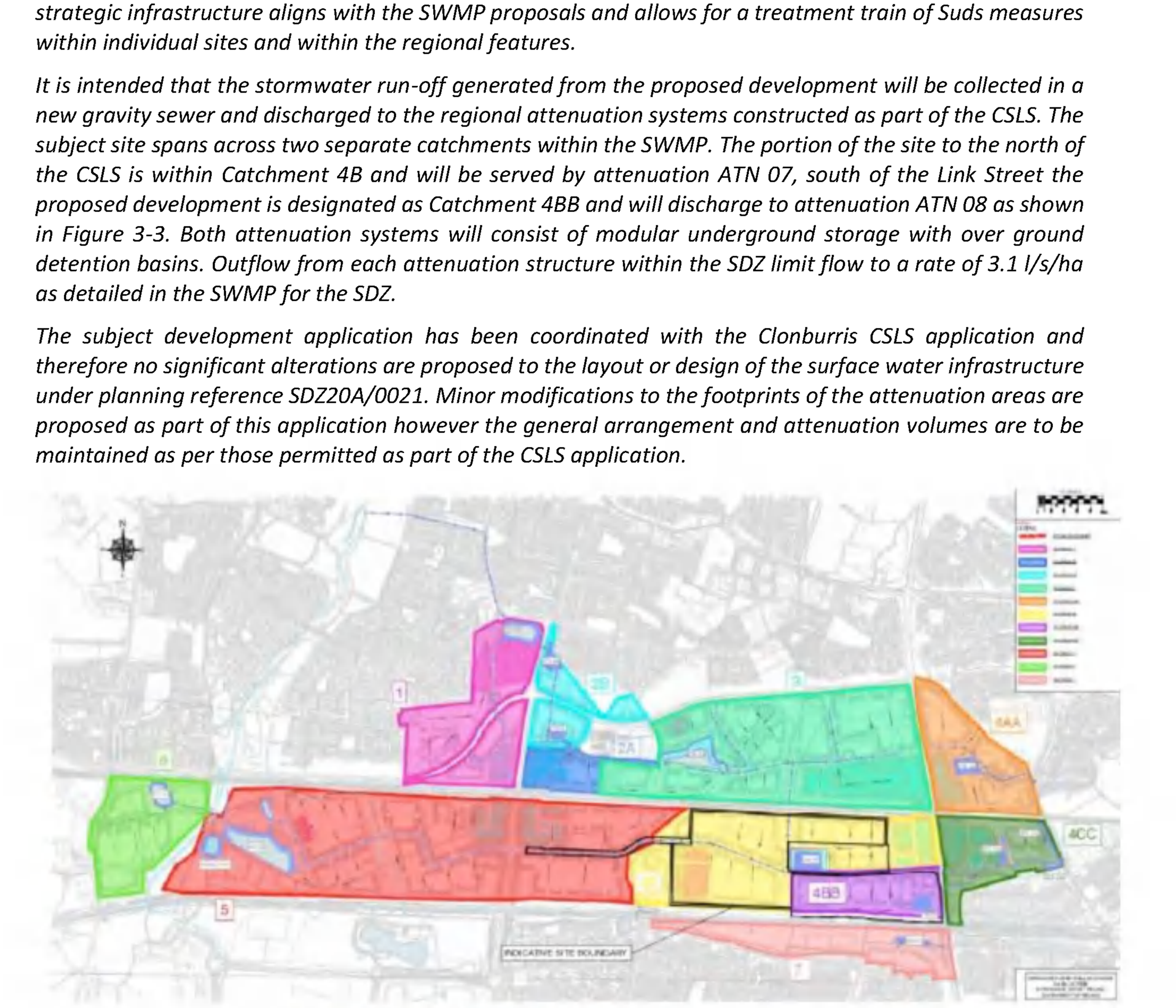


Figure 3-3: SDZ Catchment breakdown

The below table documents the site design compliance with the SWMP Requirements & Objectives'

SDZ Requirements/ Objectives	***Proposed Development Compliance***
O1. It is an objective of the Surface Water Management Plan that proposals for all development cells include provision for at least two separate SuDS features	*The proposed objective is met and exceeded in the subject design. Suds features in the site design (prior to discharge to regional SuDS features) include* • *Permeable Paving* • *Bioretention areas* • *Swales*
O2. It is an objective of the Surface Water Management Plan that green roofs are provided to any suitable buildings with area >300m² within Urban Centre sub sectors. Green roof coverage should be minimum of 60% of building area	*The proposed site is not within an Urban Centre sub sector therefore objective is not applicable.*
O3. It is an objective of the Surface Water Management Plan that runoff from roads adjacent to suitable parkland or landscape strips should be conveyed in vegetated open channel SuDS features	*The proposed objective is met in the subject design. Swales are provided to collect and convey road runoff along western and southern boundaries where adjacent to open space*
O4. It is an objective of the Surface Water Management Plan that new link streets incorporate drainage discharges from carriageway runoff to tree pits or similar features.	*Link street design is provided separately to this development under planning reference SDZ20A/0021. Drainage discharges to suds features are noted to incorporated into this separate application*
O5. It is an objective of the Surface Water Management Plan that all private parking areas are surfaced with pervious paving.	*The proposed objective is met in the subject design. All Private parking areas are proposed to be surfaced with pervious paving.*

SuDS and Attenuation

In relation to the proposed implementation of SuDS and attenuation measures into the surface water drainage strategy, this report outlines the following:

'3.3 SUDS

In accordance with the GDSDS it is proposed to use Sustainable Urban Drainage systems (SUDS) for managing storm-water for the proposed development. The aim of the SUDS strategy for the site will be to;

- *Attenuate storm-water runoff.*
- *Reduce storm-water runoff.*
- *Reduce pollution impact.*
- *Replicate the natural characteristics of rainfall runoff for the site.*
- *Recharge the groundwater profile*

The proposed layout of the drainage and SUDS is detailed on drawings 162119-DBFL-CS-SP-DR-C-1301 to 1304.

The Surface Water Management Plan agreed with SDCC includes a number of potential SUDs feature to be implemented on individual sites within the SDZ. The following SUDs features are incorporated into the design for the subject site:

1. *Swales/Bioretention Areas - Where possible Swales and Bioretention areas have been implemented into the design as shown on drawings 162119-DBFL-CS-SP-C-1301 to 1304. Surface water generated from the adjacent roads and footpaths will discharge directly to these SuDS features via inlet kerbs detailed on drawing 162119-DBFL-CS-SP-C-5004.*

2. *Permeable Paving – The proposed design includes permeable finishes on all private driveways and parking bays within the development as shown on drawings 162119-DBFL-CS-SP-C-1201 to 162119-DBFL-CS-SP-C-1203.*
3. *Regional Attenuation [delivered as part of CSLS works] - Including Detention Basin and ponds and petrol interceptors*

The incorporation of the above SuDS elements will provide a sustainable manner in which to disperse surface water from the site, encourage groundwater recharge and provide a treatment train of run-off and subsequent improvement of discharge quality.

3.4 Attenuation

As set out in the SWMP and the Infrastructure Design Report for SDZ20A/0021, attenuation volumes for the SDZ are generally provided on a regional basis (with the exception of urban centre and school sites).

The attenuation that will serve the subject site is to be constructed as part of the Clonburris Southern Link Street (CSLS) in advance of the proposed development. As mentioned in Section 3.2.1 the proposed development spans across two separate catchments, 4B and 4BB, within the Clonburris SDZ.

These discharge to separate attenuation zones, ATN 07 and ATN 08, with an allowable discharge rate of 3.1l/s/ha, detailed below:

- *Attenuation ATN 07 comprises of underground modular storage with a maximum storage capacity of 6,900m3. Above this structure is a detention basin that will provide 3,100m3. Overall, the structure provides 10,000m3 of storage required for a 100 year storm for the subject site north of the CSLS and other lands within Catchment 4B and the overall SDZ.*
- *Attenuation ATN 08 comprises of underground modular storage with a maximum storage capacity of 3,140 m3 with an above ground detention basin that will provide 1,350m3 providing a total of 4,490m3 storage required for a 100 year storm for Catchment 4BB.*

Surface water discharge from ATN08 will continue to flow through the surface water sewers constructed as part of the CSLS will pass through downstream attenuation pond designated ATN 11a before discharging to the existing surface water network on Ninth Lock Road.

The attenuation systems for the CSLS have been approved under planning reference SDZ20A/0021. Minor amendments to the plan footprints permitted under SDZ20A/0021 are proposed as part of the current application however the overall general arrangement and attenuation volumes are to be maintained as per the permitted application.'

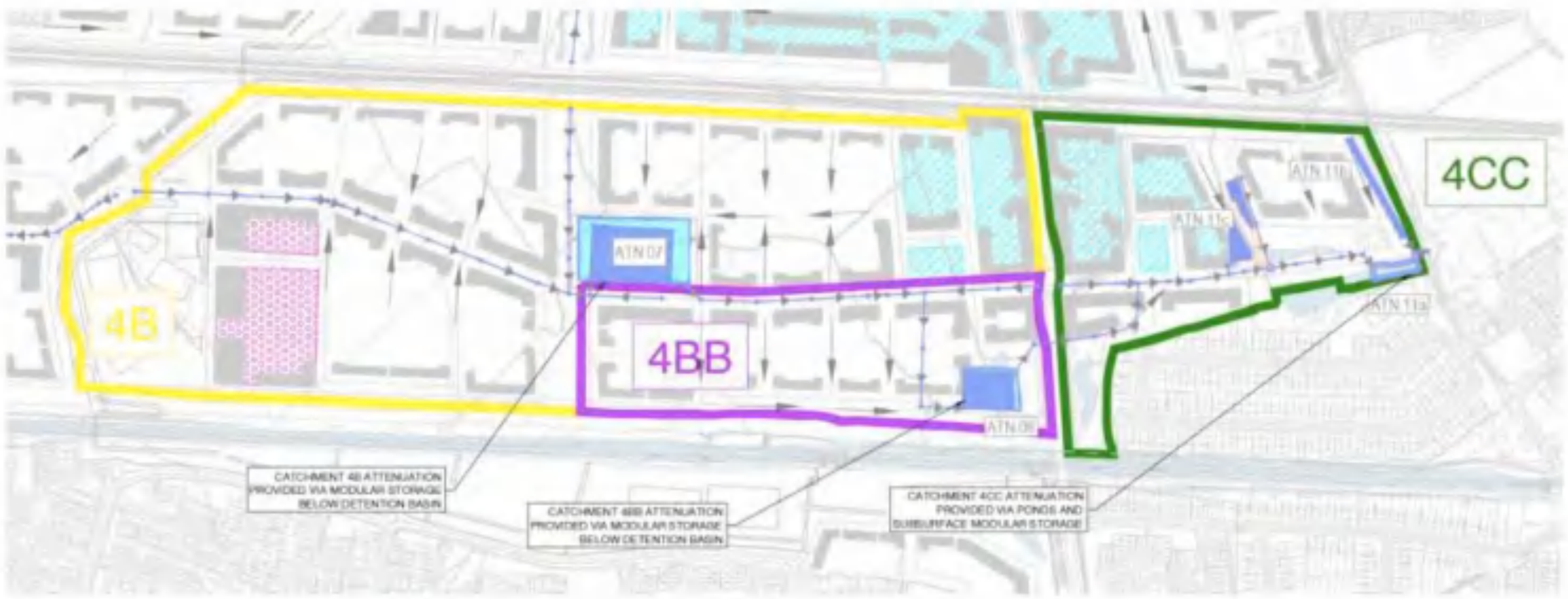


Figure 3-4: Regional Attenuation and Outfall

Flood Risk Assessment

In relation to the flood risk assessment for the Clonburris SDZ, this report outlines the following:

'As part of the Clonburris SDZ Draft Planning Scheme, South Dublin Co Council commissioned a Strategic Flood Risk Assessment SFRA for the lands which was completed by JBA Consulting and is listed as a supporting document to the planning scheme (http://www.clonburris.ie/Documentation/Clonburris-SDZ-SFRA.pdf). The subject sites land was accounted for in the Clonburris SDZ Strategic Flood Risk Assessment. It was predicted that the subject site was at low risk of flooding (Flood Zone C) for events up to the Q1000 event. The study also found there is no existing development within the subject site that is at potential risk of flooding.

As part of the flood risk assessment, historic and predicted flood risk mapping published by the OPW on the Flood Hazard Mapping Website http://www.floodinfo.ie/ was reviewed.

Historical flood maps/data indicate there are no recorded flood events within the proposed site boundary. There are to recorded recurring flood events within 1km of the proposed site. The first is a recurring flood event at the Cappaghmore Culvert located approximately 500m to the east of the site. The Second is located at the Beech Row Bungalows approximately 380m to the east of the site.

The Eastern CFRAM (Catchment Flood Risk Assessment and Management) study details the predicted risk for a variety of fluvial and coastal flood scenarios. The mapping does not include the watercourse reaches affected by the proposed scheme and only maps downstream flooding. The proposed development is therefore outside of the Q100 and Q1000 flood extents and is therefore in within Flood Zone C (low risk of flooding).

Figure 3-6 Extract of CFRAMS Data from OPW FloodInfo.ie

The OPW undertook an Irish Coastal Protection Strategy Study (ICPSS) which produced coastal/tidal flood extents maps for the Irish coastline for a 0.5% AEP tidal flood level. This map indicates that the Site is far outside the extents of the coastal/tidal flood zone.'

Flood Exceedance

In relation to flood exceedance allowance, this report outlines the following:

'For storms greater than the 1%AEP pluvial event, the development's drainage network design may be exceeded and run-off may flow above ground along the main roads. The development has been designed without low areas/depressions where possible and run-off will generally make its way along the proposed roads north towards the CSLS or south east towards the detention basin at ATN08. House floor levels have been set to make allowance for any possible areas of surface ponding during exceedance events.'

Figure 3-8 Flood Exceedance Allowance

Foul Drainage

In relation to existing foul drainage, this report outlines the following:

'*The existing site is predominantly greenfield and therefore has no foul loading at present. The planning application SDZ20A/0021 includes the trunk foul sewers which the subject site will connect into. The subject sites foul layout will be designed to connect into the trunk foul sewers.*'

In relation to the proposed design strategy, this report outlines the following:

'The overall SDZ site has been divided into 7 separate wastewater catchments (refer to Figures 4.1 & 4.2) the subject site is within Catchment X. The proposed site will benefit from foul infrastructure proposed as part of the CSLS. Trunk Foul sewer network has been designed as part of the CSLS to serve the subject based on the average net density for catchment X, ranging from the "Low margin" to a "High Margin".

The overall SDZ lands are relatively flat therefore the pumping of wastewater is required. It is proposed that the wastewater generated from the new houses and apartments for this application will be collected by new gravity sewers that discharges to the trunk sewer within the new Link Road. This in turn discharges to a future Irish Water pumping station (Pumping Station #1 as shown in Figure 4.2) adjacent to the R113 Fonthill Road. This future pumping station and its rising main connection to the existing 9B trunk sewer on Fonthill Road is being delivered by Irish Water as part of the Irish Water Clonburris Local Infrastructure Housing Activation Fund (LIHAF) Scheme. The pump station is currently at planning application stage with SDCC under planning reference SDZ21A/0006.'

The proposed drainage layout (sheets 1-4) and typical attenuation area are demonstrated in Figures 10-14.

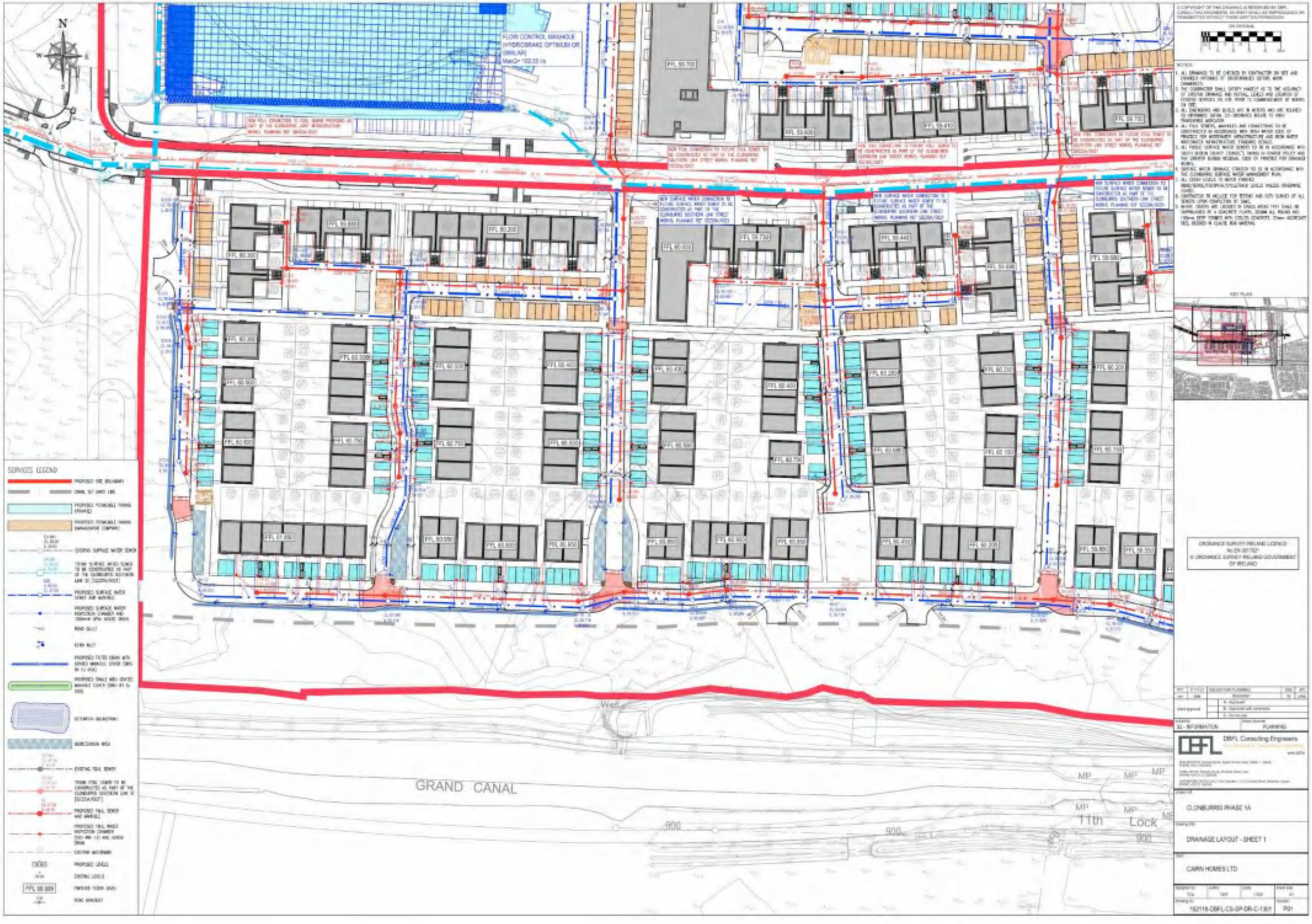


Figure 10. Drainage layout – Sheet 1

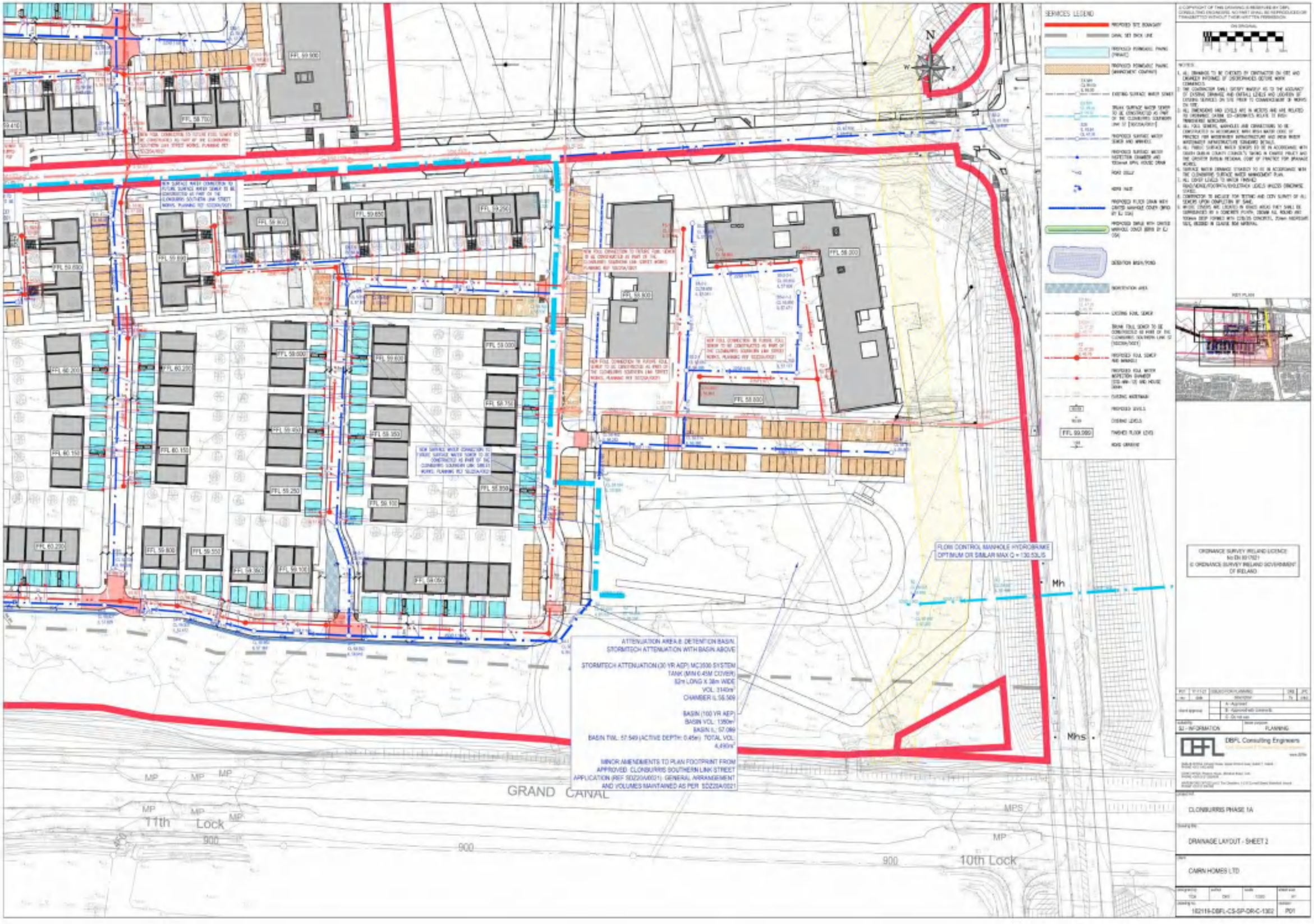


Figure 11. Drainage layout – Sheet 2

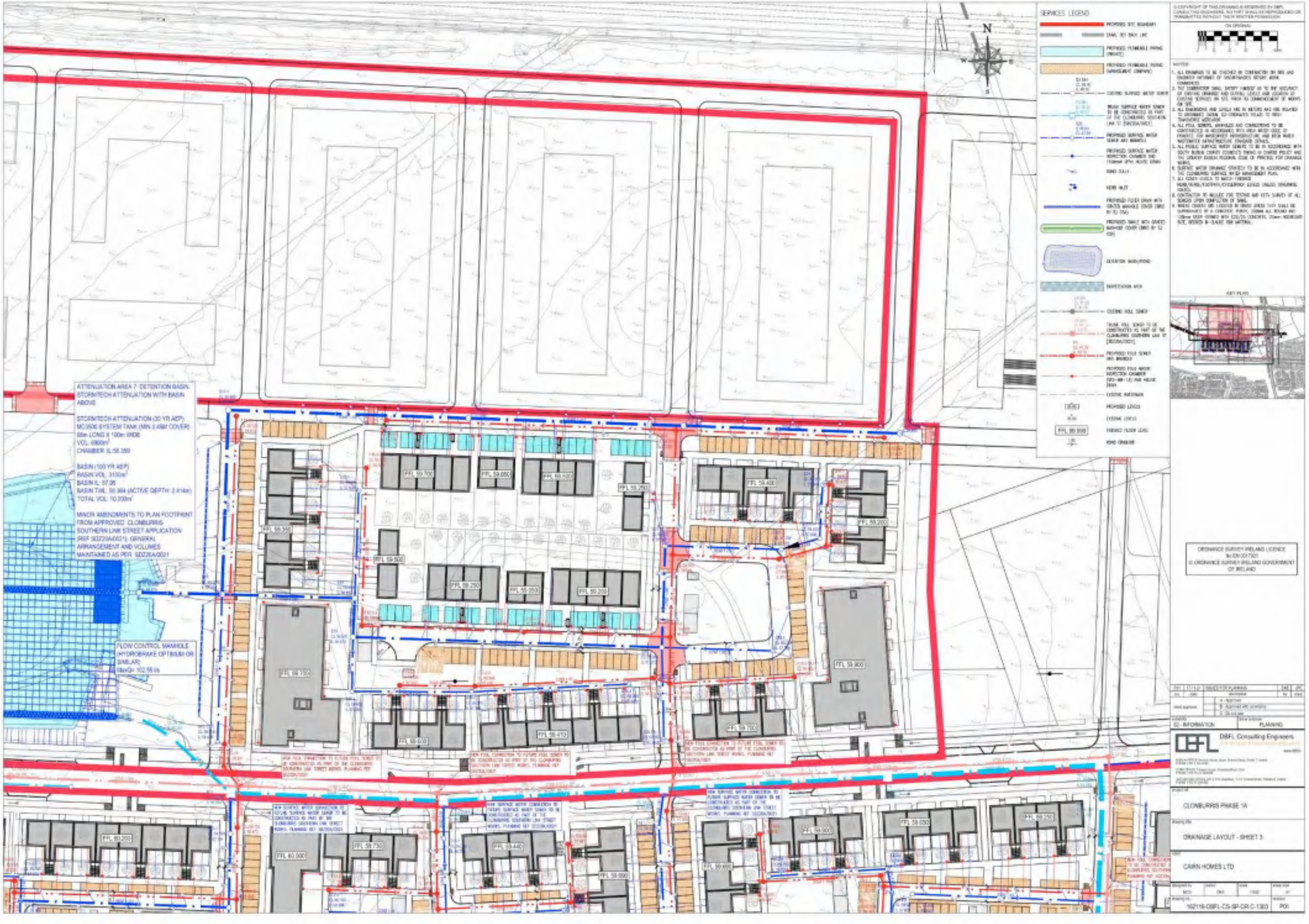


Figure 12. Drainage layout – Sheet 3

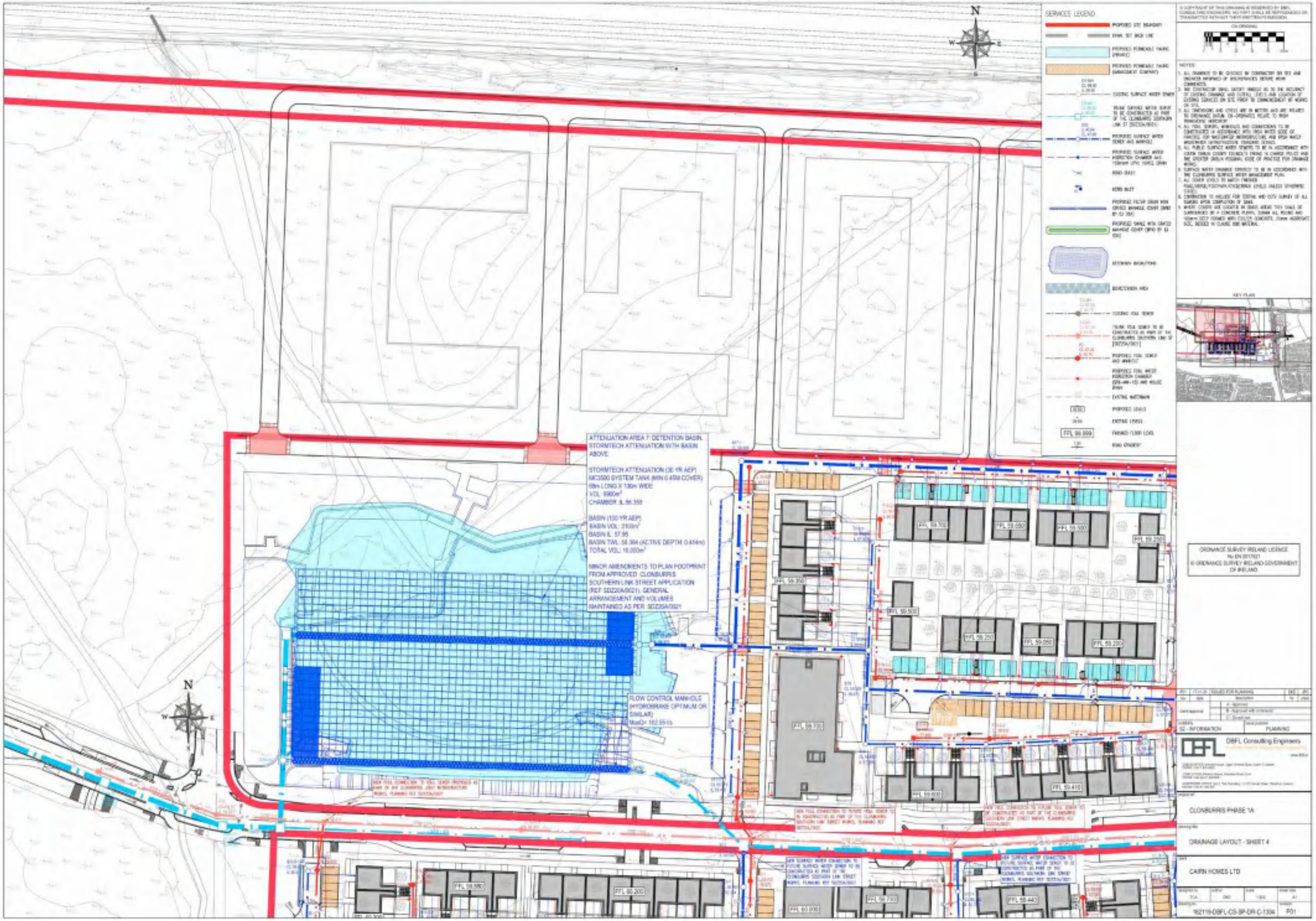
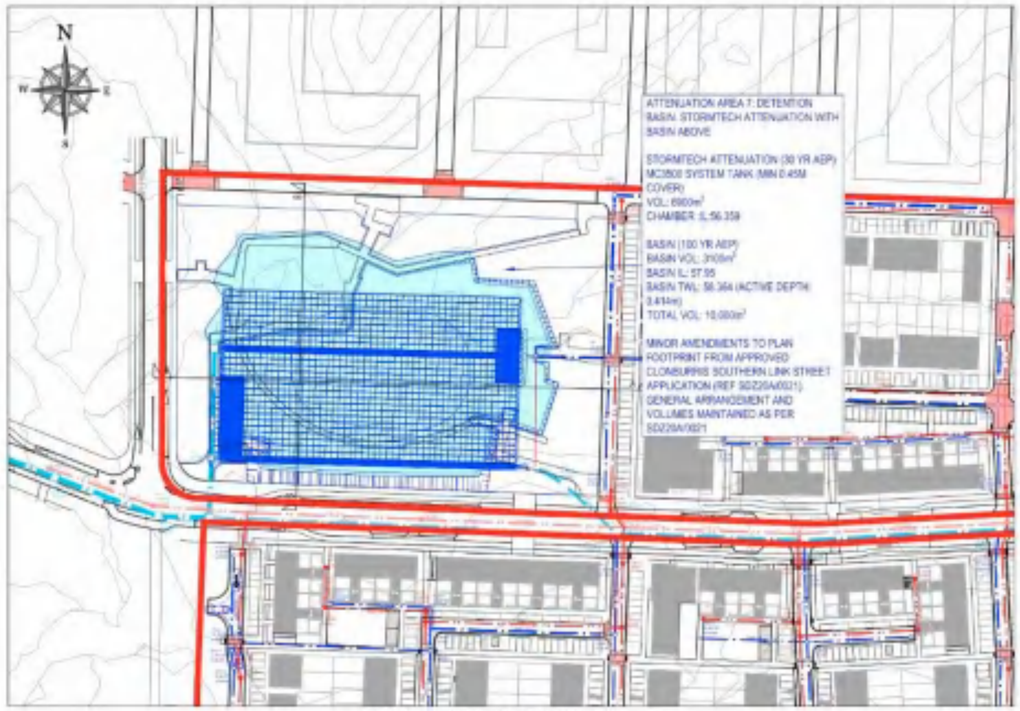
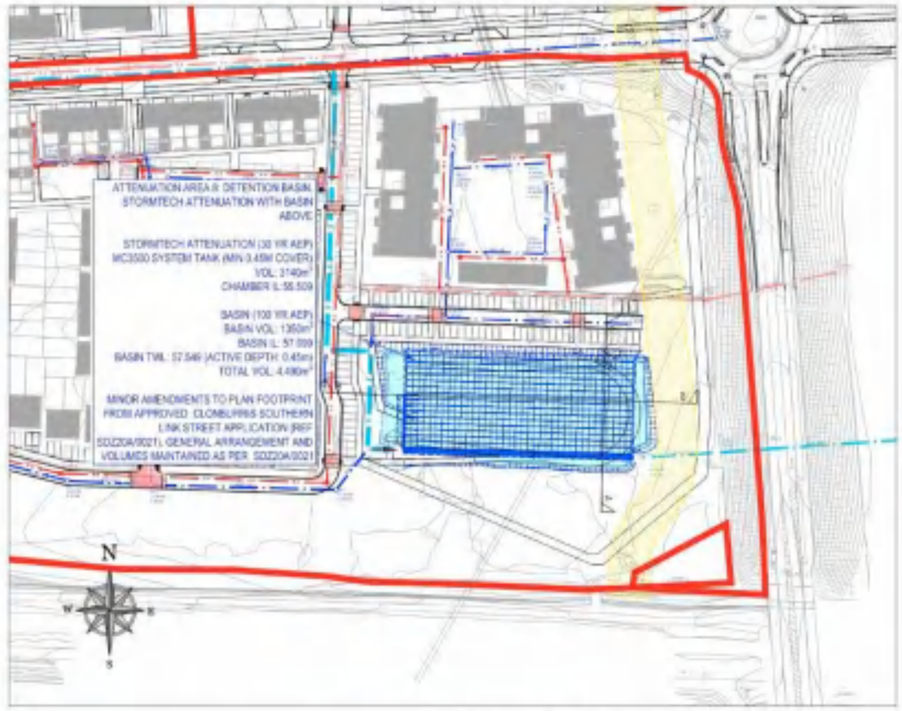


Figure 13. Drainage layout – Sheet 4



ATTENUATION 07 PLAN (SCALE 1:1000)



ATTENUATION 08 PLAN (SCALE 1:1000)

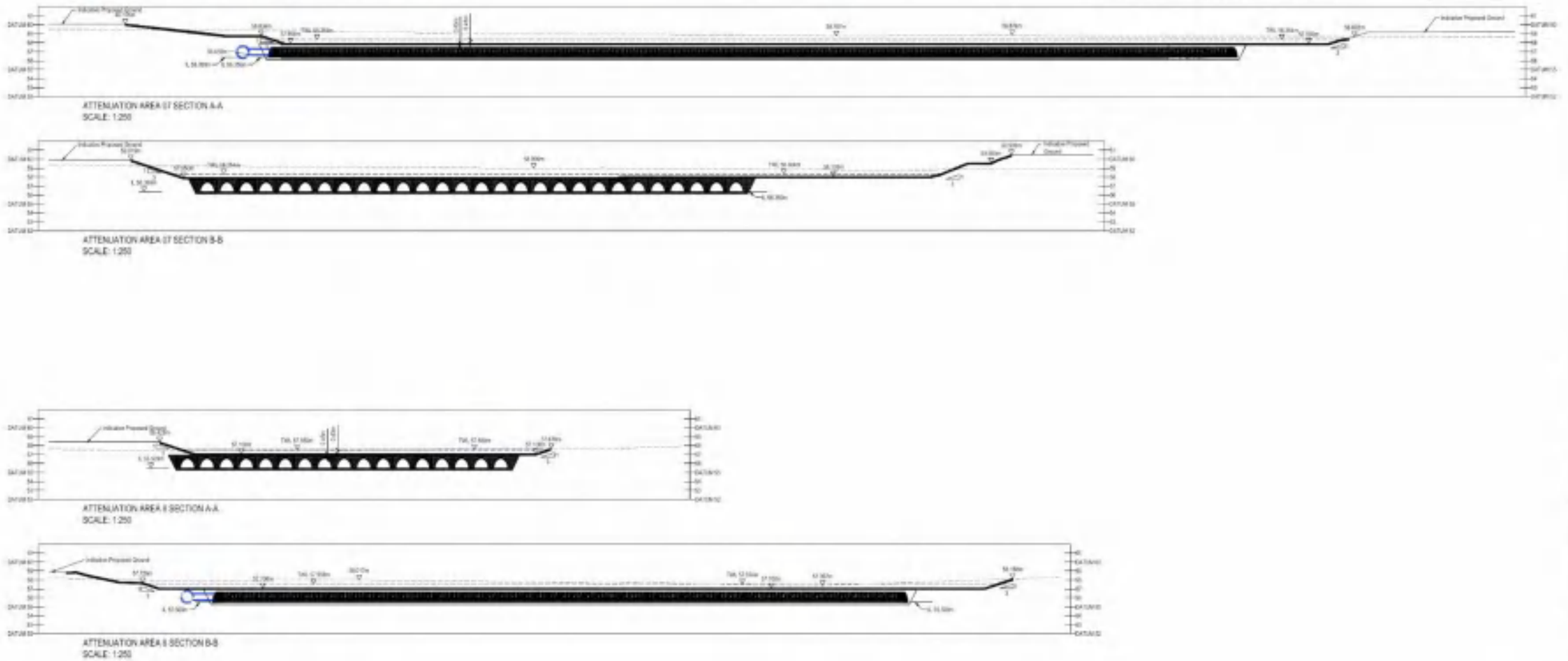


Figure 14. Typical attenuation area

Identification of Relevant Natura 2000 Sites

The proposed development site is not within a European site. As outlined in Office of the Planning Regulator (2021) "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source- Pathway-Receptor framework and not by arbitrary distances (such as 15 km)*."

A key factor in the consideration as to whether or not a particular European site is likely to be affected by the proposed development is its distance from the development location. It is generally, but not necessarily, the case that the greater the distance from the plan or project the smaller the likelihood of impacts. In this case, the nearest European site to the proposed development is 5.1 km away (Rye Water Valley/Carton SAC). The receiving environment is one in which there is no direct pathway to European sites. In those circumstances the ZoI of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and lighting impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites.

In the event that surface water runoff or dust enters the Grand Canal via the drainage ditch, the slow flow rate of the canal, dense aquatic vegetation, the presence of the wide waterbody of Grand Canal Dock sites, the estuarine element of the River Liffey and the significant distance along this network (12.2 km), would result in the desilting of the surface water prior Natura 2000 sites. Silt or pollutants would settle, be dispersed, or diluted along this network prior to reaching Natura 2000 sites. In the absence of mitigation measures, no significant impacts on the qualifying interests of Natura 2000 sites are predicted.

A wintering bird assessment was carried out by Scott Cawley (Appendix I) on the full Clonburris Strategic Development Zone lands which includes the Grand Canal. The proposed development site represents approximately 20% of the overall SDZ survey area. As outlined in the Scott Cawley report:

'*Wintering bird surveys carried out between November 2020 and March 2021 recorded 34 species in the Clonburris SDZ lands and its immediate vicinity. Of these species, 12 were wintering species listed as SCIs of nearby European sites, of which one species is Red-listed (i.e. of High Conservation Concern) and eight species Amber-listed (i.e. of Medium Conservation Concern) on the Bird of Conservation Concern in Ireland. In addition, eight non-SCI wetland bird species and 17 other bird species (e.g. passerines and raptors), of which six are Red-listed and nine Amber-listed, were recorded within or immediately adjacent to the Clonburris SDZ lands during the surveys.*

Observations of SCI and non-SCI wetland wintering bird species within the survey area were contextualised against the populations of these species in nearby European sites (SCI species only) and/or against their numbers in terms of international and national population thresholds, where available. The peak counts of these species present in the survey area during the wintering bird surveys were less than 1% of the international population. With regard to the national population thresholds for these species, the numbers of five species exceeded the 1% of the national threshold: coot (present at 11.6% of the national population of the species), lapwing (23.5%), little grebe (40%), mallard (20.4%) and tufted duck (5.2%). It should be noted that the records for peak counts exceeding the national threshold for coot, little grebe, mallard and tufted duck were from outside the Clonburris SDZ lands, from the pond in the Grange Castle Business Park, leaving lapwing as the only species whose numbers exceeded the national threshold within the Clonburris SDZ land.

Lapwing is a bird species of High Conservation Concern which has seen long-term declines since the beginning of I-WeBS counts (Lewis et al., 2019). Lapwing was present in the Clonburris SDZ lands in flock sizes varying mostly between 30 and up to 200+ individuals, with one flock consisting of only five individuals. In addition to the peak count of lapwings exceeding the national threshold for the species, the numbers recorded present over three times the I-WeBS peak count numbers recorded in Dublin Bay for the period of 2011/13 – 2017/18. Considering they are known to spend winters in non-wetland habitats, such as grasslands, away from European sites designated for them (Lewis et al., 2019), and

they were present in comparatively large flock sizes in the Clonburris SDZ, the grasslands within the Clonburris SDZ lands represent a relatively large, undisturbed feeding and/or roosting resource for lapwing in a largely built up area in the Greater Dublin Area.

In conclusion, the Clonburris SDZ and lands in its immediate vicinity support a variety of gull, wader and waterfowl species during winter months, with the most notable species of them being the Red-listed lapwing that can be present in large flocks. Considering these flocks of lapwing comprised of more than 1% of the national populations on one occasion, the Clonburris SDZ lands are deemed to be of local importance to this particular species. This conclusion takes into consideration the relatively small area of suitable habitat contained within the SDZ lands in comparison to suitable habitat found to the west of the Clonburris SDZ."

It should be noted that as the surveys covered the full SDZ including the Grand Canal, many of the species outlined above were not located within the proposed development area. These included coot, grey heron, little grebe, tufted duck, However, black headed gull, lesser black backed gull, common gull, mallard, herring gull were noted within the proposed housing development area while lapwing, cormorant were noted within proximate to a north west section of the proposed infrastructure links.

Despite a lack of direct hydrological connection to European Sites, but in the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the ZoI was expanded for this assessment to include designated sites within 15km of the proposed development site. This was done in the interest of ensuring that any pathways, however indirect or remote, were taken into account. All Natura 2000 sites within 15km are listed in Table 1. The qualifying interests, and the potential impact of the development on each European site and qualifying interest, are screened out in Table 2. SPA's and SAC's within 15km are seen in Figures 15 & 16. Watercourses, SAC's and SPA's within 15 km are demonstrated in Figures 17 - 19. No potential impacts are foreseen on European sites beyond 15km as there is no direct or indirect pathways to these sites.

As outlined in the supporting EIAR "*Black-headed gull are the only qualifying interest seen of designated sites within 15km of the proposed development. However, no individuals were recorded using the site for foraging and/or roosting, the proposed development will not result in displacement of SCI populations of black-headed gull. Lapwing, was also noted on site. However, the Boyne Estuary SPA is the nearest designated site at >40km from the site.*"

Table 1. Proximity to designated sites of conservation importance

[illegible]	[illegible]
Special Areas of Conservation	
Rye Water Valley/Carton SAC	5.1 Km
Glenasmole Valley SAC	8.2 Km
Wicklow Mountains SAC	10.4 Km
South Dublin Bay SAC	12.8 Km
Special Protection Areas	
South Dublin Bay and River Tolka Estuary SPA	12.2 Km
Wicklow Mountains SPA	12.3 Km

Table 2. Initial screening of Natura 2000 sites within 15km and Natura 2000 sites within 15km with potential of hydrological connection to the proposed development

[illegible] Code	[illegible]	[illegible] IN/OUT	[illegible]
IE001398	Rye Water Valley/Carton SAC	**OUT**	**Conservation Objectives:** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Petrifying springs with tufa formation (*Cratoneurion*) [7220] Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] Desmoulin's Whorl Snail (*Vertigo moulinsiana*) [1016] **Potential Impact** The proposed development site is located within a suburban environment at a minimum distance of 5.1 km from this SAC (Figure 15). No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects are likely**
IE0001209	Glenasmole Valley SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Petrifying springs with tufa formation (*Cratoneurion*) [7220] **Potential Impact** The proposed development site is located within a suburban environment at a minimum distance of 8.2 km from the Glenasmole SAC (Figure 15). There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. No possibility of effects is foreseen. **No significant effects likely**
IE0002122	Wicklow Mountains SAC	**OUT**	**Conservation Objectives:** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with Erica tetralix [4010]

			European dry heaths [4030] Alpine and Boreal heaths [4060] Calaminarian grasslands of the *Violetalia calaminariae* [6130] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Otter (*Lutra lutra*) [1355] **Potential Impact** The proposed development site is located within a suburban environment at a minimum distance of 10.4 km from the Wicklow Mountains SAC (Figure 15). There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. No possibility of effects is foreseen. **No significant effects likely**
IE0001398	South Dublin Bay SAC	**OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110] **Potential Impact** The proposed development site is located within a suburban environment at a minimum distance of 12.8 km from this SAC (Figure 15). There is no direct pathway from the proposed site to this SAC. There is an indirect pathway to this SAC via foul and surface water drainage networks and the Grand Canal. Foul wastewater will be connected to a public sewer network, which ultimately discharges to Ringsend WwTP for treatment. Any pollutants or silt will be processed in the existing Ringsend Treatment networks and will not result in the possibility of effects on the Natura 2000 site. After attenuation on-site, surface water drainage will be directed to an existing surface water drainage network running under the R113 (east of the subject site), which outfalls to the River Camac, which in turn outfalls to the River Liffey and ultimately outfalls to the marine environment at Dublin Bay. However, given that surface water drainage will be attenuated on-site, the fact that surface water will then be directed to an existing public surface water network, and the minimum distance (12.8 km) to this SAC via the indirect pathway, any

			pollutants or silt will settle, be dispersed, or diluted within the public network and marine environment. The indirect pathway of surface water will not result in a significant effect on the Natura 2000 site. In the event that surface water runoff or dust enters the Grand Canal via the drainage ditch, the slow flow rate of the canal, dense aquatic vegetation, the presence of the wide waterbody of Grand Canal Dock sites, the estuarine element of the River Liffey and the significant distance along this network (12.8 km), would result in the desilting of the surface water prior Natura 2000 sites. Silt or pollutants would settle, be dispersed, or diluted along this network prior to reaching Natura 2000 sites. In the absence of mitigation measures, no the possibility of effects on the qualifying interests of Natura 2000 sites are predicted. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects are likely**
Special Protection Areas			
IE004024	South Dublin Bay and River Tolka Estuary SPA	**OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Features of Interest** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban environment at a minimum distance of 12.2 km from the South Dublin Bay and River Tolka Estuary SPA (Figure 16). There is no direct pathway from the proposed site to this SPA. There is an indirect pathway to this SPA via foul and surface water drainage networks in addition to the overflow channel from the canal. Foul wastewater will be connected to a public sewer network, which ultimately discharges to Ringsend WwTP for treatment. Any pollutants or silt will be processed in the existing Ringsend Treatment networks and will not result in the possibility of effects on the Natura 2000 site.

			After attenuation on-site, surface water drainage will be directed to an existing surface water drainage network running under the R113 (east of the subject site), which outfalls to the River Camac, which in turn outfalls to the River Liffey and ultimately outfalls to the marine environment at Dublin Bay. However, given that surface water drainage will be attenuated on-site, the fact that surface water will then be directed to an existing public surface water network, and the minimum distance (12.2 km) to this SPA via the indirect pathway, any pollutants or silt will settle, be dispersed, or diluted within the public network and marine environment. The indirect pathway of surface water will not result in a significant effect on the Natura 2000 site. In the event that surface water runoff or dust enters the Grand Canal via the drainage ditch, the slow flow rate of the canal, dense aquatic vegetation, the presence of the wide waterbody of Grand Canal Dock sites, the estuarine element of the River Liffey and the significant distance along this network (12.2 km), would result in the desilting of the surface water prior Natura 2000 sites. Silt or pollutants would settle, be dispersed, or diluted along this network prior to reaching Natura 2000 sites. In the absence of mitigation measures, no the possibility of effects on the qualifying interests of Natura 2000 sites are predicted. Given the minimum distance to this SPA (12.2km) across a populated and developed area, no light or noise impacts on the qualifying interests of this SPA are predicted during both construction and operational phases of development. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects are likely**
IE0004040	Wicklow Mountains SPA	**OUT**	**Conservation Objectives:** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Merlin (*Falco columbarius*) [A098] Peregrine (*Falco peregrinus*) [A103] **Potential Impact** The proposed development site is located within an urban environment at a minimum distance of 12.3 km from the Wicklow Mountains SPA (Figure 16). There is no direct or indirect hydrological pathway from the proposed development site to the SPA. Further, given the minimum distance to this SPA (12.3km) across a populated and developed area, no light or noise impacts on the qualifying interests of this SPA are predicted during both construction and operational phases of development. The construction and operation of the proposed development will not impact on the conservation interests of the site. No potential effects are foreseen. **No significant effects are likely**

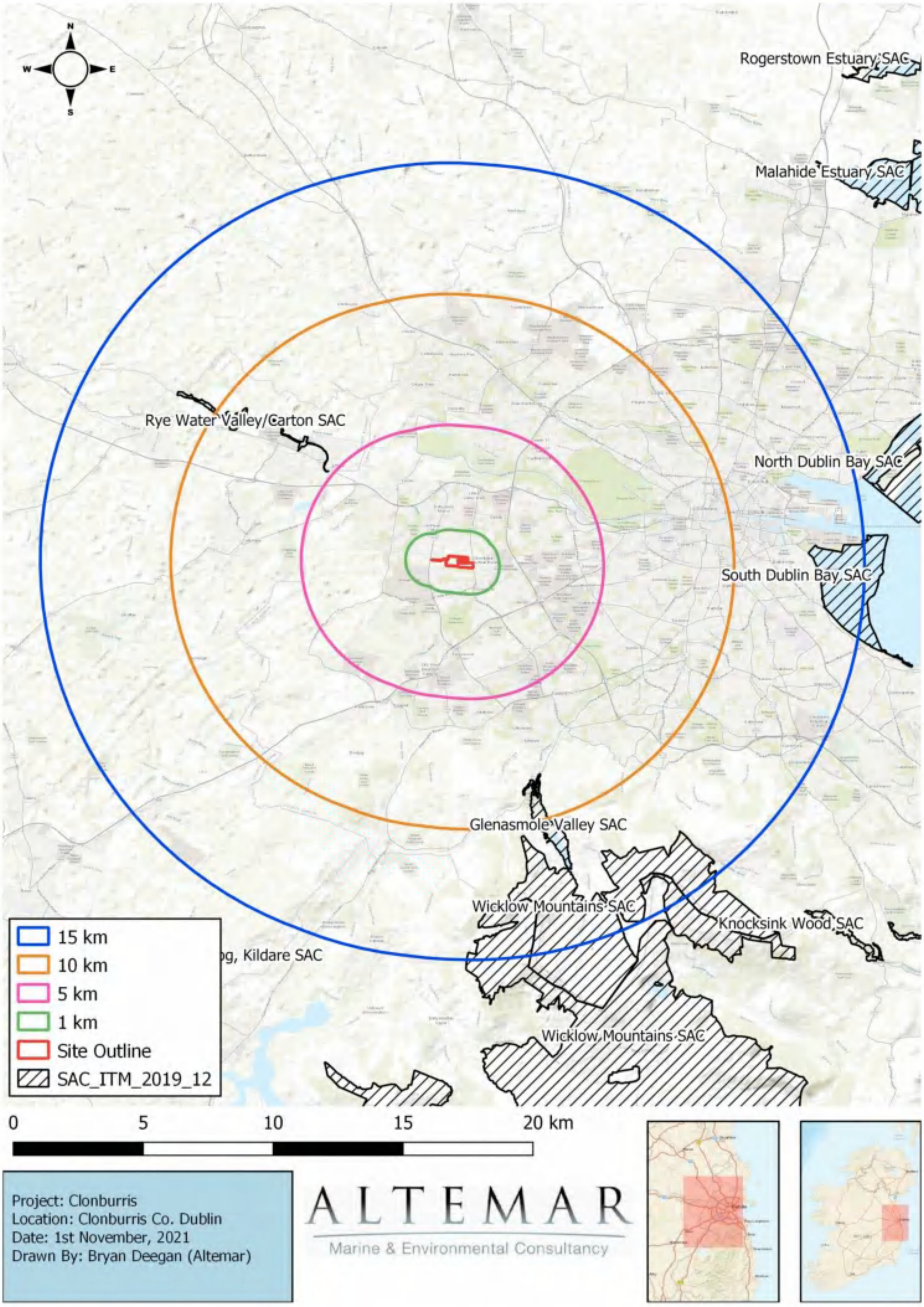


Figure 15. Special Areas of Conservation (SACs) located within 15km of the proposed

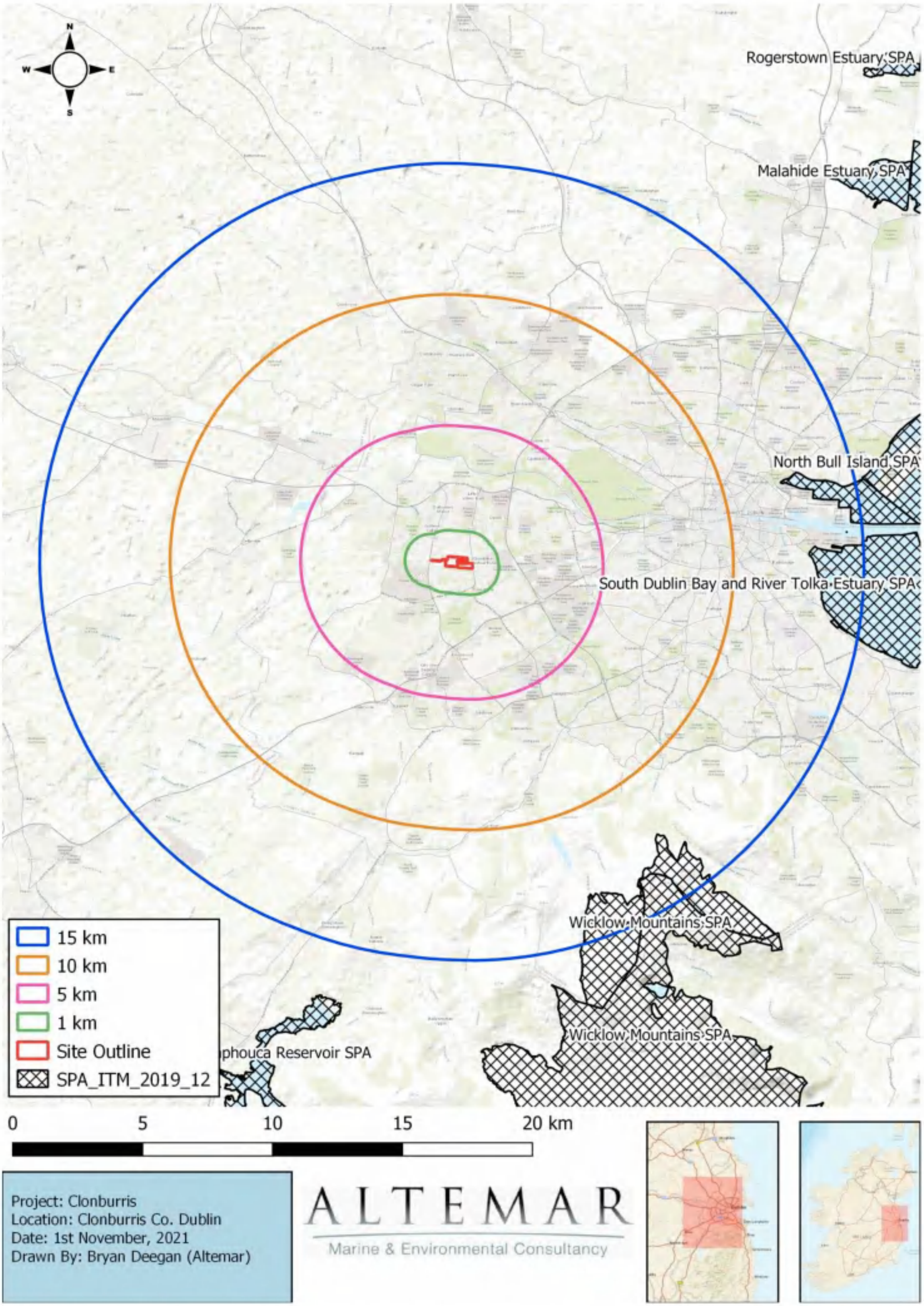


Figure 16. Special Protection Areas (SPAs) within 15km of the proposed development

Figure 17. Waterbodies within 1km of the proposed development (EPA-WFD data)

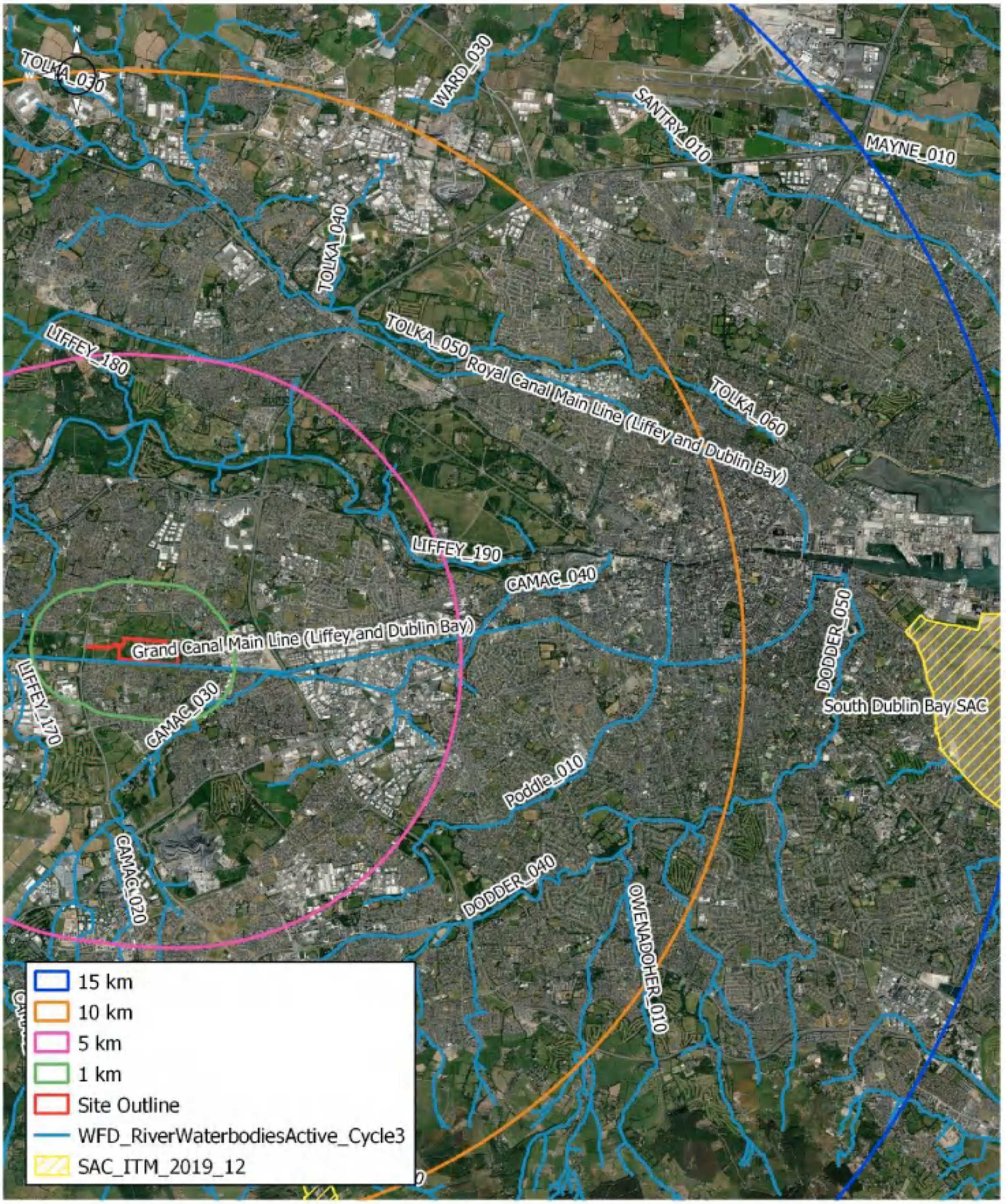


Figure 18. Waterbodies and SACs within 15km of the proposed development (EPA-WFD data)

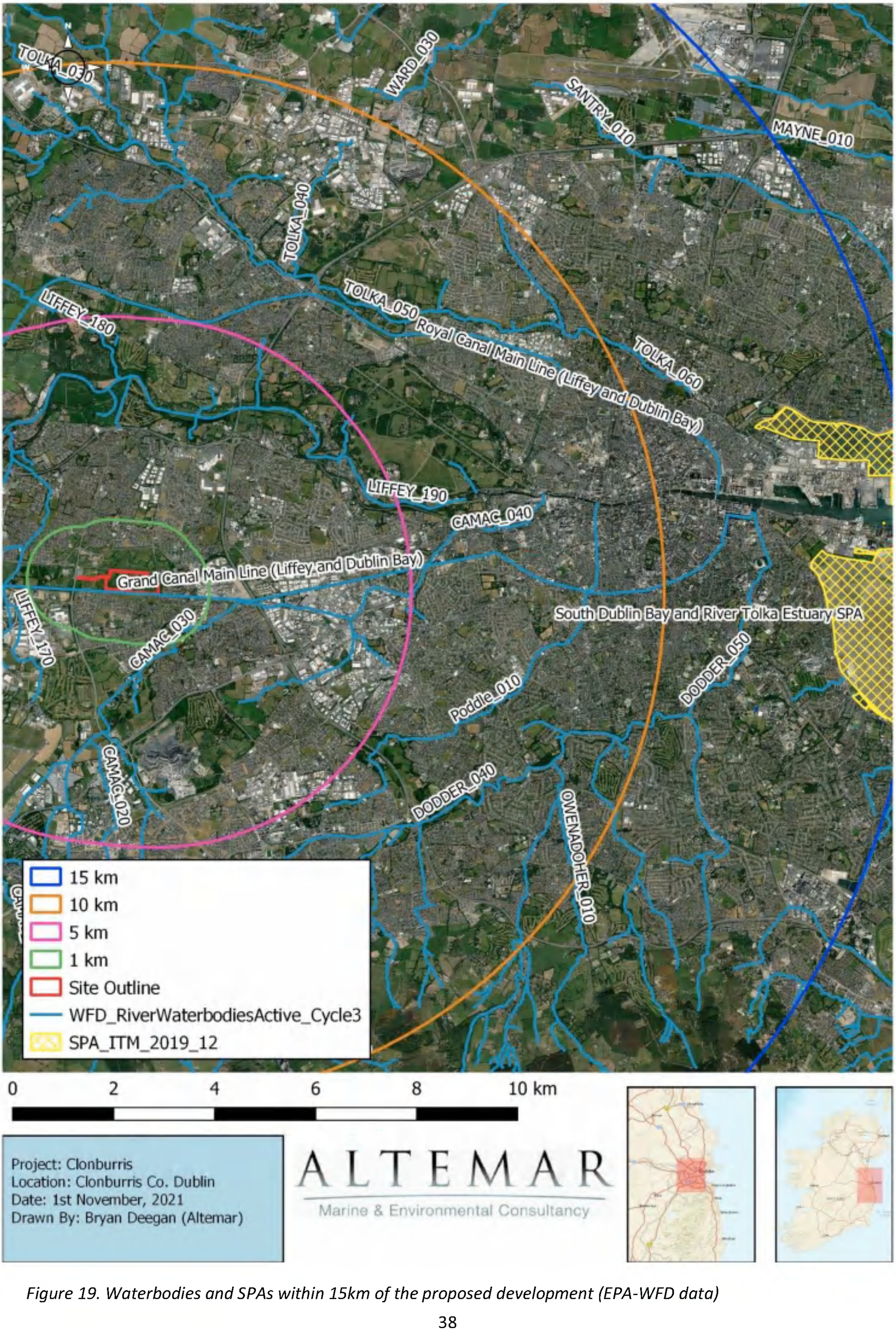


Figure 19. Waterbodies and SPAs within 15km of the proposed development (EPA-WFD data)

In-Combination Effects

There are several developments that received planning permission located in the area immediately surrounding the subject site. The following is a list of planning applications as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Map' portal:

Table 3. Initial In-combination effects evaluated (developments surrounding the subject site)

Planning Ref.	Address	Proposal
SD20A/0309	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22	Provision of 4 new information and communications technology (ICT) Facility buildings and associated development at the subject site, superseding elements of the extant planning permissions on site (Reg. Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185). The application site is subject to an EPA Industrial Emissions Licence (Ref. No,: P1113-01) relating to the Energy Centre permitted on site, The single storey Energy Centre, gas pressure reduction station, and 110kV Gas Insulated Switchgear (GIS) substation permitted under Reg, Ref.: SD18AI0068 and Reg. Ref.: SD19AI0185 will be constructed as previously approved and are not affected by the current application. The proposed development will comprise the following: The construction of 4 ICT Facility buildings (ICT Facilities 1, 2, 3, and 4) with a combined total gross floor area {GFA) of c. 47,564.5 sq.m, Each ICT Facility building includes associated external plant areas, totalling c, 20,649.5 sq,m, ICT Facilities 1, 2, and 3 will be located in the eastern portion of the site, and each comprise a GFA of c. 15,196 sq.m (including ancillary office and administration space) over part two and part three levels with a maximum height of c, 25 metres and a parapet height of c, 19.5 metres, Each of the ICT Facilities will include an associated external plant area of c, 6,624 sq,m, ICT Facility 4 will be located in the southern portion of the site and comprises a GFA of c, 1,976.5 sq,m (including ancillary office and administration space) over two levels with a maximum height of c, 15 metres and a parapet height of c. 10.5 metres, This ICT Facility includes an associated external plant area of c. 777.5sq.m, Each ICT Facility building will accommodate ICT equipment halls, associated electrical and mechanical plant rooms, loading bays, maintenance and storage space, office administration areas, and screened plant. Construction of internal road network and circulation areas, footpaths, provision of 153 no. car parking spaces and 54 no, cycle parking spaces. Connections to vehicular access routes, roads, services and permitted infrastructure relating to the Energy Centre and 110kV GIS substation permitted under Reg, Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185. Provision of emergency generators with associated flues, water storage tanks and associated pump rooms (comprising 150 sq,m in total) to serve each of the proposed ICT Facility Buildings. Hard and soft landscaping and planting, lighting, and all associated works, including underground foul and storm water drainage network, boundary treatments and security fencing, attenuation areas, and utility cables.
SD20A/0283	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Demolition of existing single storey vacant house, garage and outhouse (total gross floor area (GFA) c.291.2sq.m) and removal of existing temporary construction car park; Construction of a single 1-4 storey Central Administration Building and 2 2-storey (with mezzanine) data centres (DUB14 & DUB15) all to be located west of data centres DUB9, DUB10, DUB12 & DUB13 within the MS campus; The Central Administration Building (c.6.03m to c.19.85m high) will comprise central office administration, with staff cafeteria, staff gym and reception (GFA c.3,520sq.m), with provision of PV panels on the roof; each data centre (c.15.6m high to parapet height and c.18.65m to top of roof plant) will

		include data halls, admin blocks (comprising offices, canteen, loading dock, storage and ancillary areas) and a variety of mechanical and electrical plant areas/structures including Modular Electrical Rooms (MERs), battery rooms and transformer areas. GFA of DUB14 is c.28,072sq.m and GFA of DUB15 is c.28,173sq.m (c.56,246sq.m in total); DUB14 will also include 21 diesel generators and associated sub-stations (E-houses) and 11 mechanical flues (each c.30.75m high); Provision of a gas generator compound (to serve DUB15) containing 20 generators, 5 E-houses and 5 flues (c.25m max height); Provision of a Gas Networks Ireland gas skid including 3 kiosk buildings; Expansion of existing electrical sub-station compound (originally granted under SD07A/0632) to provide 3 additional transformer bays. 3 E-houses and 1 control room, 2 auxiliary transformers; 2 sprinkler tank and pump house areas, 1 additional rainwater harvesting plant; Provision of 168 permanent car parking spaces and 40 cycle parking spaces; Provision of additional western access to the MS campus (to serves the Central Administration Building) from the Business Park estate road (including bridge over the Griffeen River) with existing temporary access to be extinguished; Physical integration with the remainder of the existing MS campus (including internal access roads and landscaping) with associated modifications to the western boundary of the DUB09/DUB10/DUB12/DUB13 data centre development as permitted under SD16A/0088; Provision of a new temporary construction car park (with 802 car spaces, shuttle bus stop and shelter) on site north of the main entrance to the business park; Total gross floor area of the development will be c.59,766sq.m; All associated site development works, drainage and services provision, landscaping, boundary treatments (including security fencing) and associated works;
SD20A/0109	Kishoge Community College, Thomas Omer Way, Lucan, Co. Dublin	2 storey modular classroom building and a single storey toilet building, steel framed covered walkway structure linking to the existing school, relocation of existing bicycle shelters and all associated site development works.
SD18A/0323	Grange Castle Business Park, Clondalkin, Dublin 22	Construction of a two storey data centre with three storey central service spine (7,246sq.m) with plant at roof level, that includes a reception area (274.4sq.m), shipping area (264.3sq.m) and three data halls (each 582.5sq.m - total 1,747.5sq.m) plus service spine and ancillary space at ground floor; storage (476sq.m) at mezzanine level above the shipping area; and office (560sq.m), three data halls (each 582.5sq.m - total 1,747.5sq.m) plus service spine and ancillary space at first floor level; and service spine at second floor level only. The new data centre will include plant at roof level; associated support services, 7 standby generators with associated flues (each 17.29m high). The development with include a single storey sub-station (74.5sq.m), transformer 26.8sq.m and bin compound (33sq.m) and will connect to existing Grange Castle infrastructural services the will include a new access road that will provide independent vehicular access to the site off the northern spine road that provides access to the existing data centre granted under SD15A/0034. The development will include ancillary site works as well as fencing, signage, entrance gate, 22 car parking spaces that include 2 disabled car parking spaces, as well as sheltered bicycle parking. The development will also include modifications to the attenuation pond, and to the landscaping previously permitted under SD15A/0034. Temporary permission is also sought for 72 temporary construction worker parking spaces, temporary construction compound and temporary construction access from Grange Castle Business Park lands to the west.

SD17A/0192	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	ingle storey Modular Laboratory extension sized 470sq. m and 4.5m high and located to the south of the existing QA/QC building. This Laboratory will be built in two equal phases. Single storey Modular Warehouse extension sized 476sq.m and 5.2m high located to the south of the existing warehouse. This consists of six equally sized modular cold storage units and associated external plant. This facility will be built in phases according to need. The conversion of the existing temporary construction related car park to a permanent car park for 220 car parking spaces including lighting and ancillary works located to the south of the existing QA/QC building. A new screen wall constructed of metal cladding around the existing waste handing yard located to the south of the existing yard on site. The new screen wall is 2m high on top of an existing screen wall 2.7m high. Minor modifications to the existing 2.3m high security fence to the north of the site. This application consists of a variation to a previously permitted development on an activity for which a licence under Part IV of the Environmental Protection Agency Act 1992 (as amended) is required and full details of the proposed development and its anticipated environmental impacts will be notified to the Environmental Protection Agency.
SD16A/0236	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22.	A new 5 storey bio-pharmaceutical manufacturing building to be built in two phases. Phase 1 sized 20,320sq.ms and 28.2 meters high including a single storey link sized 1,203sq.m, and Phase 2 sized 14,320sq.m and 28.2 meters high, including a single storey link sized 750sq.m, located to the south of their existing Drug Substance Building. A single storey warehouse extension located to the south of the existing warehouse including new docking facilities sized 1,142sq.m and 11.2 meter high. A three storey extension located to the east of the existing laboratory building sized 1,328sq.m and 17.6 meters high. A new south elevation with new windows on the fourth floor of the existing drug substance building. New site works including 565 new car parking spaces of which 282 are relocated car parking spaces - 282 spaces lost due to the development footprint - located to the north of the site, together with a new bicycle parking facility, a new permanent heavy goods entrance at the current construction entrance to the south boundary of the campus and new fencing, 2.1 meters high, to the east, west and south side boundaries. Permanent car parking of 350 spaces for sustaining construction and contract personnel utilising a portion of the existing temporary contractor car park. Upon completion of the construction and commissioning activities, the remainder of the contractor car park will be decommissioned. A new single storey security building sized 56sq.m and revisions and alterations to the existing road, services and landscaping and new items of plant and equipment located in the existing and proposed yards, and associated pipe bridges. All associated site works.

In relation to Planning Ref. **SD16A/0236**, an Appropriate Assessment Screening Report was prepared by Environmental Impact Services to accompany this planning application. This report concludes with the following:

'In order to determine the potential impacts if any, of the extension of a pharmaceutical facility at the Pfizer plant at Grange Castle, County Dublin, on European sites, Appropriate Assessment screening was undertaken. The likely impacts (direct, indirect and cumulative), that could arise from the proposed development (its construction, operation and decommissioning) have been examined in the context of a number of factors that could potentially affect the integrity of European sites. It has been determined that the proposed development is not directly connected with or necessary to the management of European sites. In summary it can be objectively concluded that there are not likely to be adverse effects on the Natura 2000 network of sites resulting from the proposed development and accordingly

it is unnecessary to proceed to the next step and prepare a Natura Impact Statement / Appropriate Assessment, in this instance.'

In relation to Planning Ref. SD17A/0192, an Appropriate Assessment Screening report was prepared by AOS Planning Services to accompany this planning application. This report concludes with the following:

'It is concluded that the project is not foreseen to give rise to any significant adverse effects on any designated European Sites, alone or in combination with other plans or projects. This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated. Consequently, a Stage 2 – NIS is not required for the project.'

In relation to Planning Ref. **SD18A/0323,** an Environmental Impact Assessment Report (EIAR) was prepared to accompany this planning application. The Biodiversity Chapter of this EIAR concludes the following predicted impacts on the subject site:

'*Assuming successful implementation of mitigation measures, no significant residual impacts are predicted.'*

In relation to Planning Ref. **SD20A/0283**, an Environmental Impact Assessment Report (EIAR) was prepared to accompany this planning application. The Biodiversity Chapter of this EIAR concludes the following predicted impacts on the subject site:

'*Habitats*

The development is located in an area of low to moderate ecological value and as such predicted to have a neutral imperceptible effect on biodiversity. Specific local mitigation measures include the avoidance of cutting of vegetation during the bird nesting season with regard to the construction phase

With the employment of appropriate mitigation measures with regard to water quality and the protection of the Griffeen River during all aspect of construction and operation, the Proposed Development will have a neutral imperceptible and long-term effect on the Griffeen River.

With the employment of appropriate mitigation measures with regard to local biodiversity, the Proposed Development will have a neutral imperceptible and long-term effect on biodiversity.

Bats

There is no evidence of a current or past bat roost on site, therefore no significant negative effects on these animals are expected to result from the proposed redevelopment.

Badgers

There will be no significant impact on badger populations and the predicted impact will be neutral and imperceptible.

Birds

Potential impacts on nesting birds can be avoided by timing the cutting of vegetation as required by the Wildlife Acts with a neutral imperceptible impact.'

In relation to Planning Ref. **SD20A/0309**, an Environmental Impact Assessment Report (EIAR) was prepared by AWN Consulting to accompany this planning application. The Biodiversity Chapter of this EIAR concludes the following predicted impacts on the subject site:

'*The development is located in an area of low to moderate ecological value and as such is unlikely to have any significant impacts. The current arrangement of silt settlement and further SuDS attenuation at the site will avoid local impacts on the Camac River and the Gallanstown Stream.*

If the bat sensitive lighting as described in Section 8.6 is employed, then there will be no residual impact on bats. The proposed landscaping of the southern boundary of the site will have a positive impact on local biodiversity. The overall impact from the Proposed Development is predicted to be ***neutral, imperceptible*** *and* ***long-term*** *on biodiversity.'*

Further, it is worth noting that a previous planning application located within the boundaries of the subject site has been granted permission. The table below outlines this application as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Map' portal:

Table 4. In-combination effects evaluated (developments located within the boundaries of the subject site)

Planning Ref.	Address	Proposal
SDZ20A/0021	In the townlands of Adamstown, Grange, Kishoge, Clonburris Litte & Cappagh, Co. Dublin	10 year permission for roads and drainage infrastructure works as approved under the Clonburris Strategic Development Zone Planning Scheme (2019) to form part of the public roads and drainage networks providing access and services for the future development of the southern half of the overall Strategic Development Zone (SDZ) lands; the roads infrastructure works are for the construction of c. 4.0km of a new road, known as Clonburris Southern Link Street, generally consisting of 7m wide single carriageway, plus on either side of the carriageway landscaped verges, 1.75m wide off-road cycle tracks and 2m wide footpath including public lighting, trees, 288 on-street car parking spaces (including 26 disabled parking spaces), pedestrian crossings, bus stops, a number of vehicular access spurs to facilitate future development of adjoining lands, a total of 8 new junctions (including 3 junctions to facilitate future road developments within the SDZ; 2 junctions with proposed local access roads and 3 new junctions with Hayden's Lane, Lynch's Lane and Ninth Lock Road) and alterations to 4 existing junctions on Newcastle Road (R120), Grange Castle Road (R136), Fonthill Road (R113) and also to the existing access road to Park and Ride facilities at both Kishoge Station and at Fonthill Station; alterations to the existing public roads Newcastle Road (R120), Hayden's Lane Access Road, Hayden's Lane, Lynch's Lane, Grange Castle Road (R136), Fonthill Road (R113) and Ninth Lock Road arising from new junctions with the Clonburris Southern Link Street consisting of reconfiguration of a c.165m long section of Newcastle Road (R120) including road widening and revisions to layout of junction with Hayden's Lane Access Road; incorporation of Hayden's Lane Access Road into proposed Clonburris Southern Link Street; provision of new junction with Hayden's Lane and Clonburris Southern Link Street; incorporation of a c. 26m long section of Lynch's Lane into proposed Southern Link Street and provision of a new junction with Clonburris Southern Link Street; reconfiguration of a c. 260m long section of Grange Castle Road, including road widening and replacement of existing roundabout with signalised junction; reconfiguration of a c. 250m long section of Fonthill Road, including road widening and replacement of existing roundabout with signalised junction; reconfiguration of a c.125m long section on Ninth Lock Road including road widening and provision of a new junction with Clonburris Southern Link Street; construction of 2 local access roads, consisting of c. 110m long road extending north from Clonburris Southern Link Street and providing access to proposed foul pumping station and generally consisting of a 6m wide single carriageway plus on either side of the carriageway 2m wide footpath including public lighting , 2 set-down parking spaces and vehicular access to proposed foul water pumping station; north/south Link Street (c. 240m in length) extending north from southern Link Street to the Kildare-Cork railway line and generally consisting of a 7m wide single carriageway plus on either side of the carriageway 1.3m wide landscaped verge, 1.75m wide off-road cycle lane, 2m wide footpath including public lighting and 2 vehicular access spurs to facilitate future development of adjoining lands; the drainage

		infrastructure works include 8 attenuation systems (with outfalls to Griffeen River, Kilmahuddrick Stream and existing storm sewers) including 4 ponds , 2 modular underground storage systems and 2 detention basins combined with modular underground storage systems all adjacent to proposed Clonburris Southern Link Street; surface water drainage culverts to existing watercourses; flood water compensation area adjacent to Griffeen River; surface water drainage and water supply trunk infrastructure within proposed road corridors; wastewater infrastructure including a foul pumping station and pipe network within proposed road corridors to facilitate drainage connections to future wastewater drainage infrastructure within the adjoining SDZ lands (including future Irish Water pumping station) and to connect to the existing sewer network in Cappaghmore housing estate; ducting for public electrical services and utilities and the diversion of existing utilities is provided for within the proposed road corridor; Permission is also sought for all ancillary site and development and landscape works associated with the development including hard and soft landscaping, boundary treatments, road markings and signage, enabling works and temporary construction works (including site accommodation, site compounds and temporary boundary fencing); the application is made in accordance with Clonburris Strategic Development Zone Planning Scheme 2019 and relates to a proposed development within the Clonburris Strategic Development Zone Planning Scheme Area as defined by Statutory Instrument No. 604 of 2015; an Environmental Impact Assessment Report accompanies the application.

In relation to Planning Ref. **SDZ20A/0021,** an Appropriate Assessment Report was prepared by Scott Cawley Ltd. to accompany this planning application. This report concludes with the following:

'*Following an examination, analysis and evaluation of the best available information, and applying the precautionary principle, it can be concluded that the possibility of any significant effects on any European sites, whether arising from the project alone or in combination with other plans and projects, can be excluded, for the reasons set out in Section 3.3 above. In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.*

Therefore, it is the professional opinion of the authors of this report that the application for consent for the proposed development does not require an Appropriate Assessment or the preparation of a Natura Impact Statement (NIS).'

Further, in relation to Planning Ref. **SDZ20A/0021,** an Environmental Impact Assessment Report was prepared by Stephen Little & Associates to accompany this planning application. The Biodiversity Chapter of this EIAR outlines the following residual impacts of the proposed development on biodiversity:

'Construction and Operational Stages

Following the implementation of the mitigation measures outlined in Section above, the proposed development will not result in any significant residual effect on the Key Ecological Receptors identified (see Table 6.8) on its own, or cumulatively together with other proposed developments.

Ecological Receptor	Ecological Valuation	Impacts with Potentially Significant Effects	Potential Significance of Effects	Mitigation Measures	Compensation	Significance of Residual Effects
Designated Sites						
Grand Canal pNHA	National	Introduction of non-native invasive species (butterfly-bush)	National	Removal of non-native invasive species prior to construction outlined in Section 6.6.1.1	N/A	None
Habitats						
(Mixed) broadleaved woodland (WD1)	Local importance (higher value)	Permanent loss of habitat (c. 2.46ha) Introduction of non-native invasive species (butterfly-bush)	Local importance (higher value)	Removal of non-native invasive species prior to construction outlined in Section 6.6.1.1	Landscape planting outlined in accompanying landscape plans and drawings	None
Immature woodland (WS2)	Local importance (higher value)	Permanent loss of habitat (c. 0.62ha) Introduction of non-native invasive species (butterfly-bush)	Local importance (higher value)	Removal of non-native invasive species prior to construction outlined in Section 6.6.1.1	Landscape planting outlined in accompanying landscape plans and drawings	None
Hedgerows (WL1)	Local importance (higher value)	Permanent loss of habitat (c. 2.7km) Introduction of non-native invasive species (butterfly-bush)	Local importance (higher value)	Removal of non-native invasive species prior to construction outlined in Section 6.6.1.1	Landscape planting outlined in accompanying landscape plans and drawings	None
Depositing/lowland rivers (FW2) (Griffeen River)	Local importance (higher value)	Reduction in water quality	Local importance (higher value)	Mitigation measures to protect water quality outlined in Section 6.6.1.1.	N/A	None
Fauna Species						
Badger	Local importance (higher value)	None	N/A	None	N/A	None
Otter	County importance	Water quality impacts on prey availability	County importance	Mitigation measures to protect water quality outlined in Section 6.6.1.1.	N/A	None
Small mammals	Local importance (higher value)	None	N/A	None	N/A	None
Breeding birds	Local importance (higher value)	Habitat loss Collision risk/mortality	Local importance (higher value)	Seasonal vegetation clearance (Section 6.6.1.1) Breeding bird surveys prior to vegetation clearance in breeding season These measures are in adherence for Wildlife Acts	Landscape planting outlined in accompanying landscape plans and drawings	None
Wintering birds	Local importance (higher value)	Habitat loss Collision risk/mortality	Local importance (higher value)	N/A	Landscape planting outlined in accompanying landscape plans and drawings	None
Raptors (non-Annex)	Local importance (higher value)	Habitat loss Collision risk/mortality	Local importance (higher value)	N/A	Landscape planting outlined in accompanying landscape plans and drawings	None
Raptors (Annex I: peregrine)	County importance	Habitat loss Collision risk/mortality	Local importance (higher value)	N/A	Landscape planting outlined in accompanying landscape plans and drawings	None
Bats	Local importance (higher value)	Habitat loss Collision risk/mortality	Local importance (higher value)	Bat sensitive lighting plans (Sections 6.6.1)	Landscape planting outlined in accompanying	None

					landscape plans and drawings	
Common frog	Local importance (higher value)	None	N/A	Pre-construction checks in adherence for Wildlife Acts	N/A	None
Common lizard	Local importance (higher value)	None	N/A	N/A	N/A	None
Fish (species of conservation concern)	County importance	Habitat loss Disturbance or Displacement Habitat severance/barrier effect Water quality impacts	County importance	Mitigation measures outlined in section 6.6.1.1.	N/A	None
Freshwater white-clawed crayfish	County importance	Habitat loss Disturbance or Displacement Habitat severance/barrier effect Water quality impacts	County importance	Mitigation measures outlined in section 6.6.1.1.	N/A	None

***Table 6.8**: Summary of the significant residual ecological effects of the proposed development during construction and operational stages.'*

Ringsend WwTP

The increase of Population Equivalent (PE) at relating to the proposed development at Clonburris, is considered to be an insignificant increase in terms of the overall scale of the Ringsend WwTP facility. The potential maximum increased load does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on the European Sites. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE. This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018). The upgrade works to Ringsend WWTP which will increase the capacity of the facility from 1.6 million PE to 2.4 million PE. It is considered that effects on marine biodiversity and the European sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely.

No significant projects are proposed or currently under construction that could potentially cause in combination effects on Natura 2000 sites.

Given this, it is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects.

No significant cumulative impacts are likely in relation to the proposed development.

Conclusions

The proposed development at Clonburris is located in a wider suburban and developed environment 5.1 km from the nearest Natura 2000 site (Rye Water Valley/Carton SAC). Watercourses and surface runoff are seen as the main potential pathway for impacts on Natura 2000 sites. There is no direct hydrological pathway linking the proposed development site to a Natura 2000 site. There is an indirect pathway to Natura 2000 sites located within Dublin Bay via the proposed foul and surface water drainage networks in addition to a drainage ditch that leads to the Grand Canal. Foul wastewater will be connected to an existing public sewer network, which will subsequently be processed in the Ringsend Wastewater Treatment Plant. After attenuation on-site, surface water drainage will be directed to an existing surface water drainage network running under the R113 (east of the subject site), which outfalls to the River Camac, which in turn outfalls to the River Liffey and ultimately outfalls to the marine environment at Dublin Bay. However, given the minimum distance between the subject site and the nearest Natura 2000 site (12.2 km to South Dublin Bay and River Tolka Estuary SPA), any pollutants or silt produced by the proposed development during both construction and operational phases will settle, be diluted, or dispersed prior to reaching Natura 2000 sites.

In the event that surface water runoff or dust enters the Grand Canal via the drainage ditch, the slow flow rate of the canal, dense aquatic vegetation, the presence of the wide waterbody of Grand Canal Dock sites, the estuarine element of the River Liffey and the significant distance along this network (12.2 km), would result in the desilting of the surface water prior Natura 2000 sites. Silt or pollutants would settle, be dispersed, or diluted along this network prior to reaching Natura 2000 sites. In the absence of mitigation measures, no significant impacts on the qualifying interests of Natura 2000 sites are predicted. As such, the proposed development project will not have a significant effect on the conservation objectives or qualifying interests of Natura 2000 sites.

No Natura 2000 sites are within the zone of influence of this development. Having taken into consideration the effluent discharge from the proposed development works, the distance between the proposed development site to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites and the dilution effect with other effluent and surface runoff, it is concluded that this development would not give rise to any significant effects to designated sites. The construction and operation of the proposed development will not impact on the conservation objectives of features of interest of Natura 2000 sites.

This report presents a Stage 1 Appropriate Assessment Screening for the Proposed Development, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or Natura 2000 site.

On the basis of the content of this report, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.

Data Used for AA Screening

NPWS site synopses and Conservation objectives of sites within 15km were assessed. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on ESRI road maps and satellite imagery. A site visit was carried out on the 15/06/2021 to determine if the site contained possible threats to a NATURA 2000 site.

Findings of No Significant Effects Report

Details of Project	Appropriate Assessment Screening for a proposed development within the Clonburris South West Development Area of the Clonburris SDZ Planning Scheme 2019 at Clonburris, Co. Dublin.
Name and Location of NATURA 2000 Sites Within 15km	Rye Water Valley/Carton SAC Glenasmole Valley SAC Wicklow Mountains SAC South Dublin Bay SAC South Dublin Bay and River Tolka Estuary SPA Wicklow Mountains SPA
Project Description	Cairn Homes Properties Ltd. intend to apply for planning permission for a proposed development within the Clonburris South West Development Area of the Clonburris SDZ Planning Scheme 2019 at Clonburris, Co. Dublin.
Is the Project directly connected with the management of the NATURA 2000 site?	No
Details of any other projects or plans that together with this project could affect the NATURA 2000 site	None
Consider how the project is likely to affect the NATURA 2000 site	No Impact Predicted
Response to consultation	N/A
Data collected to carry out the assessment	Supporting NPWS data.
Who carried out the assessment	Altemar Ltd.
Sources of data	NPWS website, standard data form, conservation objectives and references outlined in the AA Screening Report.
Explain why these effects are not considered significant	No Natura 2000 sites are within the zone of influence of this development. There is no direct hydrological pathway to Natura 2000 sites. Having taken into consideration the effluent discharge from the proposed development works, the distance between the proposed development site to designated conservation sites, lack of direct hydrological pathway to conservation sites and the dilution effect and treatment of effluent and surface runoff, it is concluded that this development that would not give rise to any significant effects to designated sites.
Level of assessment completed	Stage 1 Screening
Overall conclusions	On the basis of the content of this report, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site. There is no possibility of significant impacts on Natura 2000 sites, features of interest or site specific conservation objectives. A Natura Impact Statement is not required.

References

The following references were used in the preparation of this AA screening report.

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.
2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. Assessment of Plans and Projects Significantly Affecting NATURA 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC; http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
7. The Status of EU Protected Habitats and Species in Ireland. http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf
8. NPWS (2021) Conservation objectives for Rye Water Valley/Carton SAC [001398]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
9. NPWS (2021) Conservation objectives for Glenasmole Valley SAC [001209]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
10. NPWS (2017) Conservation Objectives: Wicklow Mountains SAC 002122. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
11. NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
12. NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
13. NPWS (2021) Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

scott cawley

Wintering Bird Survey Report

for Clonburris Strategic Development Zone

at Clonburris, Co. Dublin

Prepared for Goodrock Project Management Limited

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Table of Contents

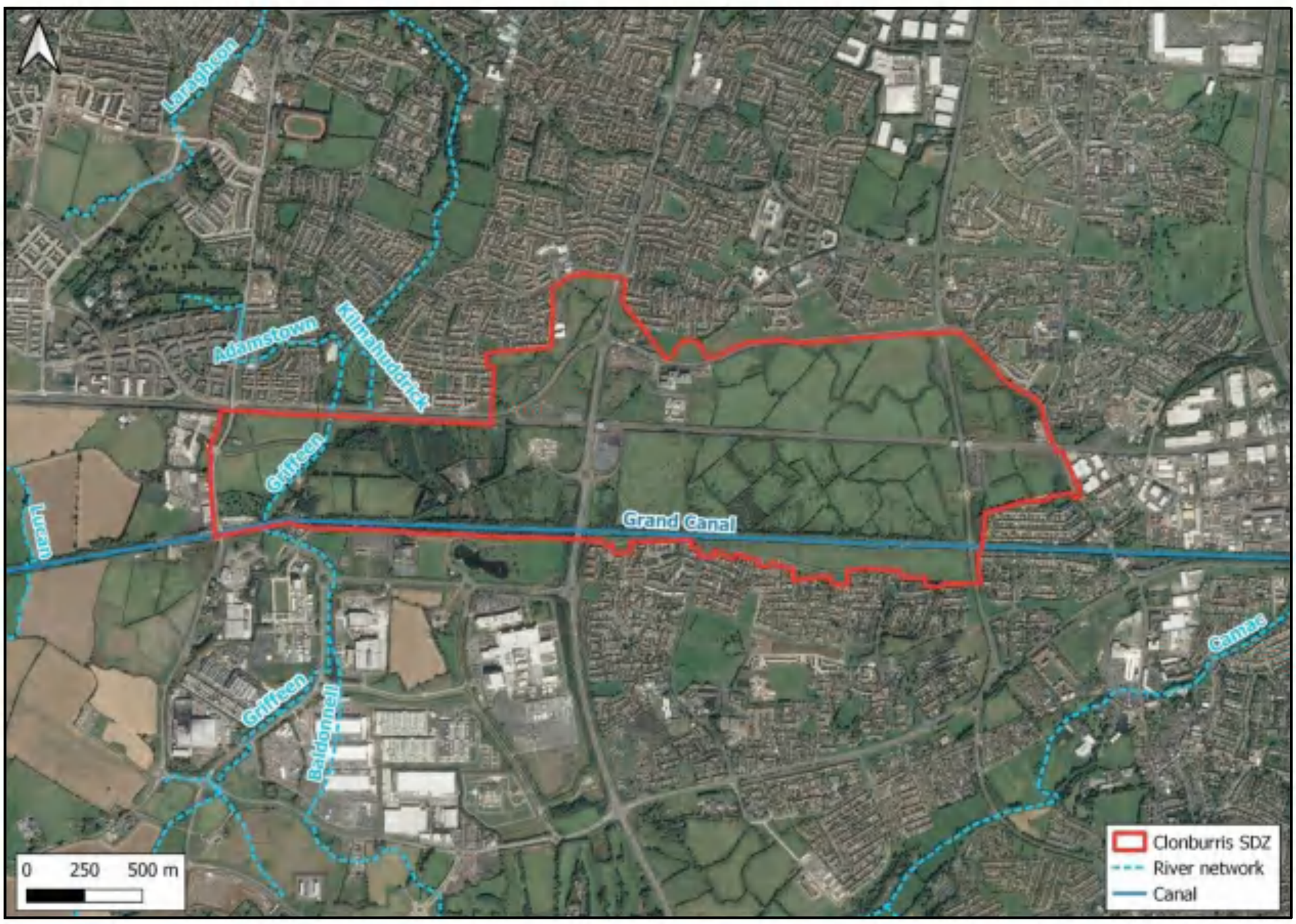
1 Introduction

1 This Wintering Bird Survey Report was authored by Emmi Virkki of Scott Cawley Ltd.

2 It provides an overview of the wintering bird baseline for lands at Clonburris Strategic Development Zone (from hereafter referred to as 'Clonburris SDZ'), Clonburris, Co. Dublin (refer to Figure 1 for location) for the season 2020/21. This wintering bird survey baseline will be utilised to inform any future planning applications in the Clonburris SDZ within the red line boundary illustrated in Figure 1, below.

3 The Clonburris SDZ spans 280 hectares, and is located west of Dublin between Lucan, Clondalkin and Liffey Valley. The area is comprised of areas of unmanaged grassland, with field boundaries demarcated by hedgerows, treelines, and scrub. Hardstanding areas within the SDZ include the South Dublin County Council (SDCC) depot, the R113 car park at Clondalkin / Fonthill railway station and associated paved areas and roads. There are two waterbodies located within the SDZ: the Griffeen River, which intersects the SDZ to the west - from the Lucan Pitch and Putt Club in the south-western corner to the Griffeen Valley Park to the north, and, the Grand Canal which runs near the southern boundary of the SDZ. The adjacent lands and wider environs are largely urban in nature, consisting of residential and commercial areas to north, east and south. The areas to west, beyond existing commercial developments, are agricultural in nature.

Figure 1 Clonburris SDZ in relation to the surrounding environment



4 Wintering waterbirds such as geese, gulls and waders are one of the most numerous avifauna in the Irish landscape during winter months between September and March. Most of them use coastal and inland wetland habitats for foraging and/or roosting, but some also take the advantage of drier habitats such as amenity grasslands. For example, Brent goose *Branta bernicla hrota* can be regularly found foraging on amenity grasslands such as football pitches in the greater Dublin area, alongside with other species such as waders curlew *Numenius arquata*, lapwing *Vanellus vanellus* and oystercatcher *Haematopus ostralegus,* and gull species black-headed gull *Chroicocephalus ridibundus* and herring gull *Larus argentatus*. Many of the wintering bird species in Ireland are listed as the Special Conservation Interest (SCI) species of Special

Protection Areas (SPAs) under the Directive 2009/147/EEC; hereafter, referred to as the 'Birds Directive'. In addition, several of them are Red-listed, such as curlew, lapwing and oystercatcher, or Amber-listed, such as black-headed gull and herring gull, on the Bird of Conservation Concern[1] in Ireland.

5 The Clonburris SDZ is not located within, or adjacent to any SPA, with the nearest SPA (South Dublin Bay and River Tolka Estuary SPA) located in Dublin Bay, *c.* 11.8km east of the SDZ lands, however it is considered to have suitable foraging habitat (i.e. open grasslands) for wintering bird species, and therefore it is important to assess the impacts on SCI populations of SPAs that may use the SDZ lands for foraging. This ensures that adequate mitigation measures are provided and adhered to where necessary, and that the conservation objectives of SCI species of SPAs in the vicinity of the Clonburris SDZ are not undermined.

6 The assessment of the site's importance to wintering bird populations is completed through comparing the maximum number of birds present at a particular site, against the criterion of it holding 1% or more of the international and national populations. According to the Ramsar Convention on Wetlands, a wetland is considered to be internationally important if it regularly holds at least 1% of the individuals in a population of one species, or 20,000 or more individuals of that species[2]. Additionally if a site holds 1% or more of the estimated national population, the site can be considered to be of national importance to that particular species. Any site regularly supporting these numbers potentially qualifies for designation under national legislation, the Birds Directive and/or the Ramsar Convention.

7 The purpose of the report is to:

- Establish the presence/absence and use of the Clonburris SDZ lands and surrounding area by wintering birds; and,
- To understand the importance of the Clonburris SDZ lands and surrounding area for wintering birds, including those SCI species for which SPAs have been designated.

2 Planning, Policy and Legislation

8 The collation of ecological baseline data and the preparation of this assessment has had regard to the following legislation and policy documents. This is not an exhaustive list but the most relevant legislative and policy basis for the purposes of preparing this Wintering Bird Survey Report.

9 The following international legislation is relevant to planning applications within the Clonburris SDZ:

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora; hereafter, referred to as the 'Habitats Directive'. The Habitats Directive is the legislation under which the Natura 2000 network[3] was established and special areas of conservation (SACs) are designated for the protection of natural habitat types listed in Annex I, and habitats of the species listed in Annex II, of that directive.

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1 Gilbert, G., Stanbury, A. & Lewis, L. (2021) Birds of Conservation Concern in Ireland 4: 2020-2026. Irish Birds 43: 1-22 (2021).

2 Information on 1% species thresholds of wintering bird species can be found at: www.bto.org

3 The Natura 2000 network is a European network of important ecological sites, as defined under Article 3 of the Habitats Directive 92/43/EEC, which comprises both special areas of conservation and special protection areas. Special conservation areas are sites hosting the natural habitat types listed in Annex I, and habitats of the species listed in Annex II, of the Habitats Directive, and are established under the Habitats Directive itself. Special protection areas are established under Article 4 of the Birds Directive 2009/147/EC for the protection of endangered species of wild birds. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats.

In Ireland these sites are designed as *European sites* - defined under the Planning Acts and/or the Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

- Directive 2009/147/EEC; hereafter, referred to as the 'Birds Directive'. The Birds Directive is the legislation under which special protection areas (SPAs) are designated for the protection of endangered species of wild birds listed in Annex I of that directive.

10 The following national legislation is relevant to planning applications within the Clonburris SDZ in the context of wintering wetland bird SCIs of European sites:

- Wildlife Acts 1976 to 2021; hereafter collectively referred to as the 'Wildlife Acts'. The Wildlife Acts are the principal pieces of legislation at national level for the protection of wildlife and for the control of activities that may harm wildlife. All bird species, 22 other animal species or groups of species, and 86 species of flora are protected under this legislation.
- Planning and Development Acts 2000 to 2021; hereafter collectively referred to as the 'Planning and Development Acts'. This piece of legislation is the basis for Irish planning. Under the legislation, development plans (usually implemented at local authority level) must include mandatory objectives for the conservation of natural heritage and for the conservation of European Sites. It also sets out the requirements in relation to environmental assessment with respect to planning matters, including transposition of the Habitats and Birds Directive into Irish law.
- European Communities (EC) (Birds and Natural Habitats) Regulations 2011 to 2015; hereafter the 'Birds and Habitats Regulations'. This legislation transposes the Habitats and Birds Directives into Irish law. It also contains regulations (49 and 50) that deal with invasive species (those included within the Third Schedule of the regulations).

11 The following plans and policies are relevant to planning applications within the Clonburris SDZ:

- National Biodiversity Action Plan 2017-2021 (Department of Culture Heritage and the Gaeltacht, 2017)
- South Dublin County Council Development Plan 2016-2022 (Dublin City Council, 2016)
- Draft Biodiversity Action Plan for South Dublin County 2020-2026 (South Dublin County Council, 2020)
- Clonburris Strategic Development Zone: Planning Scheme (South Dublin County Council, 2019)
- Biodiversity Management Plan to Inform the Parks and Landscape Strategy of Clonburris SDZ (Scott Cawley, 2021)

3 Methodology

3.1 Author Statement

12 This report was authored by Emmi Virkki of Scott Cawley Ltd., and reviewed by Dr Niamh Burke of Coiscéim Consulting and Andrew Speer of Scott Cawley Ltd. Survey methodologies followed a standard established methodology described in Section 3.3. All surveys were completed by an independent ornithologist, André Robinson.

13 Emmi Virkki is a Senior Consultant Ecologist with Scott Cawley Ltd. She obtained an honours degree in Environmental Biology, from University College Dublin and a Masters degree in Environmental Science from the same institution. Emmi is a member and volunteer of BirdWatch Ireland, and a member of the British Trust for Ornithology, the Irish Bryophyte Group, the Botanical Society of Britain and Ireland, and Bat Conservation Ireland. She has five years of professional experience working in ecology in Ireland and has worked with clients at both government and private levels. Emmi's specialism is ornithology, but she is also skilled in protected flora and fauna, invasive species and habitat surveys. She has conducted ecological survey and assessment (Ecological Impact Assessment, Appropriate Assessment and Biodiversity Chapters of Environmental Impact Assessment Reports) of linear infrastructure, residential, commercial and industrial projects.

14 Niamh Burke is Principal Ecologist with Coiscéim Ecology. She holds a BSc in Natural Sciences with Environmental Science and a PhD in salmonid ecology. She is a Chartered Environmentalist (CEnv) with the Society for the Environment (Soc Env) and a Full Member of the CIEEM. Niamh is a senior scientist with academic research and consulting experience in terrestrial ecology, aquatic ecology and fluvial geomorphology. She is an experienced project manager with a full working knowledge of EIA, the planning process and relevant environmental legislation, both national and European. With a specialism in aquatic habitats, she also has experience of terrestrial species' surveys and mitigation approaches. In her extensive consultancy roles, she has acted as reviewer for all ecological reporting and ensured consistency of standards and approach.

15 Andrew Speer is a Technical Director at Scott Cawley Ltd. with over 15 years' professional ecological consultancy experience in preparing Ecological Impact Assessments (EcIAs). Andrew is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds a BSc (Hons) in Zoology from the National University of Ireland Galway, a Pg Dip in Geographic Information Systems (GIS) from the University of Ulster and an Adv Dip in Planning & Environmental Law from King's Inns. He has extensive experience in ecological impact assessment and has been the lead author on numerous EcIA reports, Screening for Appropriate Assessment Reports, Natura Impact Statements (NISs) and Natura Impact Reports (NIRs). Andrew also provides technical review and due diligence of EcIA and AA documentation for public and local authorities to aid their decision-making process.

3.2 Desk Study

16 A desk study was undertaken in November 2020 prior to the commencement of field work and updated in July 2021 following the completion of field work and during the preparation of the survey report. The purpose of the desk study was to collate available information on the local ecological environment. The following resources were used to inform the assessment presented in this report:

- Records of wetland bird species for the 10km grid square O03 within which the Clonburris SDZ is located in, as held by the National Biodiversity Data Centre www.biodiversityireland.ie – refer to Appendix I for all desk study records
- Irish Wetland Bird Survey (I-WeBS) summary data. Summary data was downloaded from the BirdWatch Ireland website at https://birdwatchireland.ie/our-work/surveys-research/research-surveys/irish-wetland-bird-survey/ - refer to Appendix I for this data
- Ordnance Survey Ireland mapping and aerial photography from http://map.geohive.ie/
- Information on the conservation status of birds in Ireland from *Birds of Conservation Concern in Ireland* (Gilbert *et al*., 2021)
- Publicly available information on inland feeding sites for Light-bellied Brent Geese *Branta bernicla hrota* (herein referred to as Brent Geese) in the Dublin area contained within (Benson, 2009), Scott Cawley (2017) and Enviroguide (2020).
- The results of previous wintering bird surveys carried out in the Clonburris SDZ presented in *Winter Bird Survey of Clonburris SDZ* (Roughan & O'Donovan Consulting Engineers, 2020).

17 It is Scott Cawley Ltd.'s understanding that a three-year project studying the movements and behaviour of wintering bird species in Dublin Bay, and funded in part by the four Dublin local authorities (Dublin City Council, South Dublin County Council, Dún Laoghaire-Rathdown County Council, and Fingal County Council), is ongoing. The data was not publicly available at the time of writing of this report.

3.3 Field Survey

18 Wintering bird surveys were undertaken between October and November 2020 and February and March 2021 by André Robinson, an independent ornithologist, using a methodology adapted from the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species*[4]. The area between the railway line and

[4] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods - A Manual of Techniques for Key UK Species. RSPB: Sandy

the Grand Canal within the Clonburris SDZ was divided into eastern and western sections from R136. and transects covering the entire area were walked during daylight hours. The eastern and western sections were surveyed on consecutive days. Survey details are presented in Table 3.

Table 3 Details of wintering bird surveys undertaken within the Clonburris SDZ

[illegible]	[illegible]	Survey Time	[illegible]
29/10/2020	Eastern section	09:30-16:30	Dry overcast weather, with temperatures around 13°C.
30/10/2020	Western section	07:15-14:00	Overcast weather with occasional showers and temperatures around 10°C.
19/11/2020	Eastern section	09:00-15:30	Partially overcast dry weather with light breeze and temperatures around 7°C.
20/11/2020	Western section	08:00-14:15	Overcast dry weather with light breeze and temperatures around 11°C.
01/02/2021	Western section	08:00-15:20	Overcast weather with light breeze and light rain towards the end and temperatures around 5°C.
02/02/2021	Eastern section	08:00-16:30	Overcast weather with light breeze and occasional light showers and temperatures around 9°C.
27/02/2021	Western section	08:00-16:30	Partially overcast dry weather with light breeze and temperatures around 7°C.
28/02/2021	Eastern section	07:15-14:30	Partially overcast dry weather with light breeze and temperatures around 6°C.
26/03/2021	Western section	07:00-14:30	Partially overcast weather with light breeze, light hail showers and temperatures around 8°C.
27/03/2021	Eastern section	07:00-14:00	Overcast dry weather with moderate breeze and temperatures around 6°C.

19 Birds were identified by sight and sound, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes. The survey area was surveyed visually using binoculars/scope along the walked transect. Where present and readable, ring codes of birds were collected. The surveyor kept to the margins of fields in the site so as to ensure that their presence did not prevent birds landing on site.

20 The results of field surveys have been contextualised against the I-WeBS peak counts at the nearest I-WeBS site, the populations of SCI species at the nearest SPA designated for them, and against the 1% threshold of the international and/or national population of each species[5] as contained within Lewis *et al.* (2019). As gull species recording is optional during the I-WeBS counts and the national population thresholds are based on numbers recorded during the I-WeBS, there are no national population estimates against which to compare the gull peak counts, and therefore this comparison has been omitted for this species group.

3.3.1 Survey Limitations

21 It must be acknowledged that the surveys of the lands were undertaken across a single wintering bird survey season. It is possible that the number and frequency of use of inland feeding sites varies across the

[5] The 1% criterion is applied to identify sites of international and national importance for birds

wintering bird season, based on forage resource, disturbance levels, changes to site suitability and other environmental factors. Desktop sources of information have been referenced to overcome this limitation.

22 It was not possible to complete wintering bird surveys in December 2020 and January 2021, due to a health and safety issue in the Clonburris SDZ lands during the surveys carried out in November 2020. Surveys were suspended until the health and safety issue was resolved. Surveys programmed for January 2021 were postponed until the beginning of February 2021, which resulted in two sets of survey visits during this month (Table 3). Considering the small areas of suitable wintering bird foraging habitat (i.e. open short grassland) within the Clonburris SDZ lands and the abundance of better quality foraging habitat (i.e. amenity grasslands) within the wider Dublin area, and the relatively low numbers of wintering bird species being recorded within the lands during *Winter Bird Survey of Clonburris SDZ* (Roughan & O'Donovan Consulting Engineers, 2020) and during the October and November 2020 survey visits by Scott Cawley Ltd., this is not deemed to be a limitation that affects the robustness of the survey data to inform any future impact assessment.

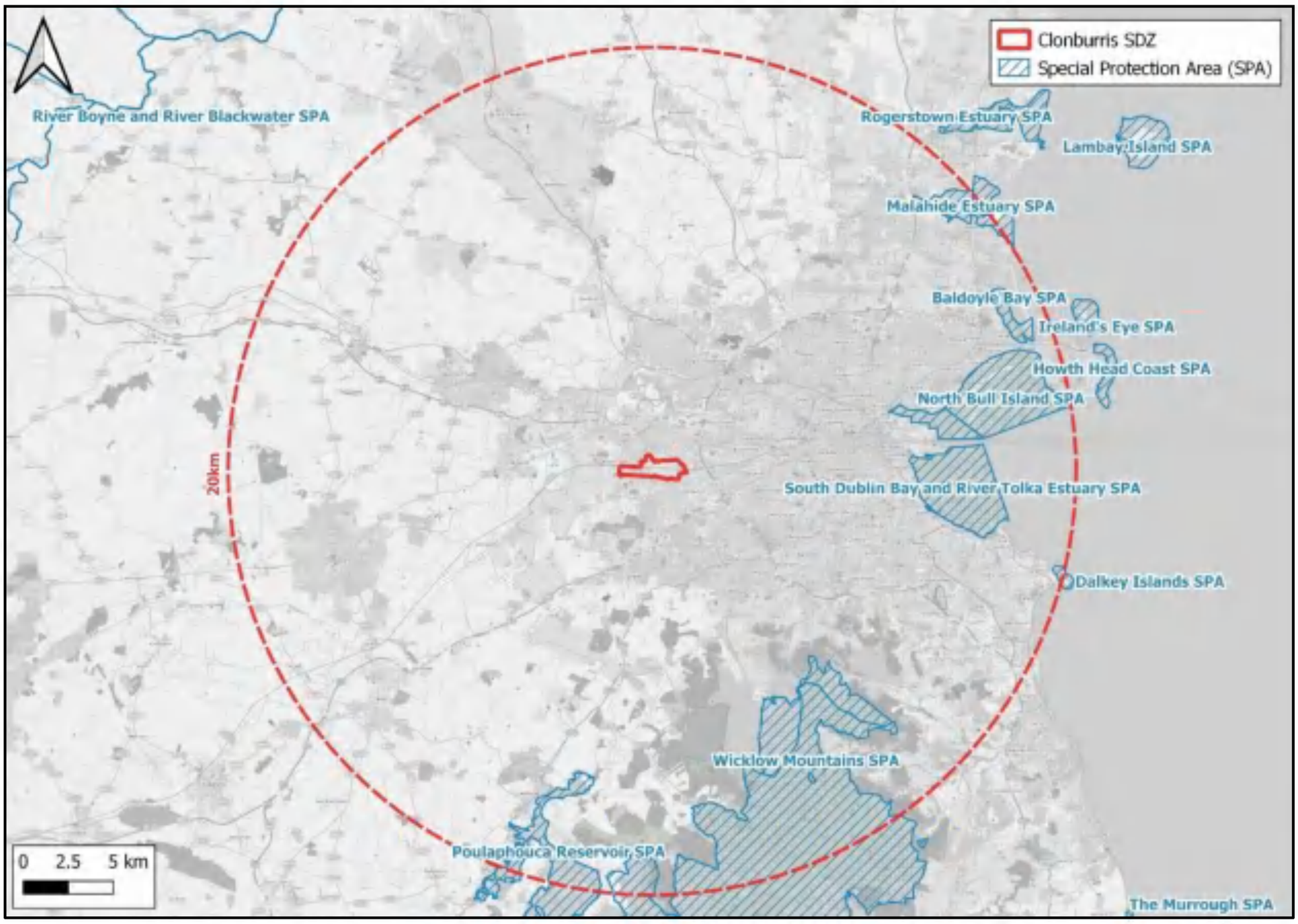
4 Wintering Bird Baseline

23 The results of desk study searches are presented in full in Appendix I of this report, while the full set of survey observations are included as Appendix II of this report. The results of desk and field surveys are summarised in this section of the report.

4.1 European sites

24 There are 12 European sites designated for bird species within 20km of the Clonburris SDZ and its immediate vicinity (see Figure 2). Of these, seven (South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Baldoyle Bay SPA, Malahide Estuary SPA, Rogerstown Estuary SPA and Poulaphouca Reservoir SPA) are designated for wintering SCI bird populations. The remaining five (Howth Head Coast SPA, Ireland's Eye SPA, Lambay Island SPA, Dalkey Islands SPA and Wicklow Mountains SPA) are designated for breeding SCI bird populations.

Figure 2 Clonburris SDZ in the context of European sites designated for bird within 20km



4.2 SCI Species

25 Records of 34 species of wetland birds, for which European sites have been designated in Ireland, were returned from the search of the NBDC database for the 10km grid square O03. The records have been reproduced in Appendix I of this report.

26 The following eleven SCI species of European sites were observed either flying over or foraging within the within the survey area in the 2020/2021 wintering bird season:

- Black-headed gull *Chroicocephalus ridibundus*
- Cormorant *Phalacrocorax carbo*
- Common gull *Larus canus*
- Coot *Fulica atra*
- Grey heron *Ardea cinerea*
- Herring Gull *Larus argentatus*
- Lapwing *Vanellus vanellus*
- Lesser black-backed gull *Larus fuscus*
- Little grebe *Tachybaptus ruficollis*
- Mallard *Anas platyrhynchos*
- Tufted duck *Aythya fuligula*

27 Of these species, one species (lapwing) is Red-listed (i.e. of High Conservation Concern) and eight species (black-headed gull, cormorant, common gull, coot, herring gull, lesser black-backed gull, mallard and tufted

duck) are Amber-listed (i.e. of Medium Conservation Concern) on the Bird of Conservation Concern in Ireland[1]. The only Green-listed (i.e. of Low Conservation Concern) species of the SCI species recorded during the surveys was grey heron.

28 In terms of frequency and location of records of SCI species within the survey area:

- Common gull and herring gull were the most frequent visitors to the Clonburris SDZ, with observations of the species on all 10 survey dates, followed by black-headed gull with observations on nine survey dates. Common gull was recorded loafing in the pond in the Grange Castle Business Park, adjacent to the Grand Canal, whereas besides being recorded in the pond with common gull, herring gull was also recorded flying across the SDZ lands, on the ground in one of the grasslands and along the Grand Canal. Similarly to common gull and herring gull, black-headed gull was recorded swimming in the pond in the Grange Castle Business Park, and also flying across the SDZ lands and on the ground in grasslands throughout the SDZ lands.
- Cormorant were recorded on five out of the 10 survey dates flying along the Grand Canal in November 2020, and February and March 2021. Cormorant was also recorded foraging within the waterbody on one occasion.
- Coot was recorded in the pond in the Grange Castle Business Park during three survey visits and once in the Grand Canal November 2020, and February and March 2021.
- Grey heron was recorded during seven survey visits during all survey months. Most records were of the species either perching and/or foraging along the Grand Canal, or flying over the SDZ lands and or foraging in a flooded grassland area adjacent to the Kishoge roundabout.
- Lapwing were recorded during four survey visits. This species was present in large flocks of up to 200 individuals in the grasslands in the eastern section of the Clonburris SDZ in October and November 2020 and February 2021.
- Lesser black-backed gull was recorded during survey visits in October 2020 and February and March 2021, with most of the records of the species being it flying over the SDZ lands, one record from the pond in the Grange Castle Business Park and another from grasslands in the north-eastern section of the SDZ lands.
- Little grebe and mallard were recorded during seven and eight survey visits, respectively, either in the pond in the Grange Castle Business Park or in the Grand Canal. Mallard were also seen flying over the SDZ lands. Both species were present throughout all survey months.
- Tufted duck were recorded during three survey visits in the pond in the Grange Castle Business Park in February and March 2021.

4.2.1 SCI Species in the Context of European Sites

29 Wetland bird species are mobile and can regularly travel up to 20km between roosting and feeding sites (Scottish Natural Heritage, 2016). For this reason, it is possible that birds observed at Clonburris SDZ could belong to populations of SCI species associated with European sites up to 20km from the survey area.

30 Considering the generic conservation objective for SPAs is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for each SPA, the ten SCI species observed foraging within or flying over the survey are discussed in more detail in the subsections set out below.

4.2.1.1 Black-headed gull *Chroicocephalus ridibundus* [A179]

<u>Desk Study Results for Black-headed Gull</u>

31 Black-headed gull *Chroicocephalus ridibundus* [A179] is a SCI species for which the following European sites within 20km of the SDZ lands have been designated:

- South Dublin Bay and River Tolka Estuary SPA (004024), *c.* 11.7km north-east of the SDZ lands. This European site encompasses the coastal and intertidal zones of Dublin Bay extending between the Bull Wall in the north and Dún Laoghaire West Pier in the south. The baseline population of black-headed gull in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 3,040 birds in the Conservation Objectives Supporting Document (NPWS, 2014a). South Dublin Bay and River Tolka Estuary SPA (004024) is listed as the fourth most important site in the country for this species. The status of their wintering populations is considered Unfavourable duAe to decline in their numbers.
- North Bull Island SPA (004006), *c.* 14.8km north-east of the SDZ lands. This European site encompasses the coastal fringes of the North Bull Island, and surrounding intertidal and coastal zones extending between the North Bull wall in the south and Howth Head in the north. The baseline population of black-headed gull in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 2,196 birds in the Site Synopsis document (NPWS, 2014b). The site hosts a population of national importance for the species.

32 There is potential that some members of the South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA wintering populations utilise the Clonburris SDZ lands for forage during the winter months, considering the SDZ lands are within the 20km foraging range. This species is a commonly encountered urban bird species, with large populations residing in the urban area around Dublin.

33 There are previous records for black-headed gull within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2013.

<u>Field Survey Results for Black-headed Gull</u>

34 Black-headed gull were observed within the survey area on nine survey dates (see Figure 3 for locations of records).). During all these survey visits, a small number of birds (<20 birds) were observed flying within the Clonburris SDZ lands. Larger flocks of the species (>20 birds) were observed on three dates between February and March 2021 (full list of observations included in Appendix II of this report). The peak count for black-headed gull foraging and/roosting in or adjacent to the Clonburris SDZ lands was 142 birds at the pond in the Grange Castle Business Park observed on 1st February 2021.

Figure 3 Records of black-headed gull from the wintering bird surveys carried out between October 2020 and March 2021

Black-Headed Gull at Clonburris SDZ in the context of European sites

35 The nearby European sites have been designated for wintering populations of black-headed gull as opposed to their breeding populations.

36 In relation to wintering populations of the species in the vicinity and the nearest SPAs, the peak count of birds (142 individuals) within the survey area potentially represents:

- 5.4% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 2,642 birds for the period 2011/2013– 2017/18 (See Appendix I).
- 4.7% of the wintering SCI populations of the South Dublin Bay and River Tolka Estuary SPA, referencing the five-year mean peak count for the period 1995/96-1999/2000 of 3,040 birds in the Conservation Objectives Supporting Document (NPWS, 2014a).
- 6.5% of the wintering SCI populations of the North Bull Island SPA, referencing the five-year mean peak count for the period 1995/96-1999/2000 of 2,196 birds in the Conservation Objectives Supporting Document (NPWS, 2014b).

37 According to Lewis *et al.* (2019), 1% of the international population of black-headed gull is 31,000 birds. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 142 birds observed in the survey area represents 0.46% of the 1% international population of the species.

4.2.1.2 Cormorant *Phalacrocorax carbo* [A017]

Desk Study Results for Cormorant

38 Cormorant *Phalacrocorax carbo* [A017] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their breeding populations are:

- Ireland's Eye SPA (004117), *c.* 23.3km north-east of the SDZ lands. The European site encompasses the island of Ireland's Eye and the surrounding coastal waters. Cormorant breed on the island in nationally important numbers (306 pairs) (NPWS, 2018a).
- Lambay Island SPA (004069), *c.* 29.9km north-east of the SDZ lands. The European site encompasses Lambay Island and its surrounding coastal waters. Cormorant breed on the island in internationally important numbers (675 pairs), with smaller number of birds (29) overwintering at the site (NPWS, 2018b).

39 Although there are no European sites designated for wintering populations of cormorant within 20km of the Clonburris SDZ lands, there is potential that some individuals of the Ireland's Eye or Lambay Island breeding population utilise the section of the Grand Canal that runs along the southern boundary of the Clonburris SDZ lands for foraging during winter months, considering some individuals winter inland[6].

40 There are previous records for cormorant within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2015.

Field Survey Results for Cormorant

41 Cormorant activity was mainly concentrated along the Grand Canal, which runs along the southern boundary of the Clonburris SDZ lands (see Figure 4 for locations of records). Observations were generally of a single individual flying either west or east along the Grand Canal, as opposed to across the Clonburris SDZ lands. On a single occasion, one individual was observed foraging in the Grand Canal on the 2nd February 2021.

6 Information on cormorant wintering habits available at: www.birdwatchireland.com.

Figure 4 Records of cormorant from the wintering bird surveys carried out between October 2020 and March 2021

Cormorant at Clonburris SDZ in the context of European sites

42 It is worth bearing in mind that nearby European sites, Ireland's Eye SPA (004117) and Lambay Island SPA (004069) have been designated for their breeding populations of cormorant as opposed to their wintering populations. The surveys undertaken to inform this report related to the winter season, and it is not clear how the wintering population relates to the breeding populations at Ireland's Eye and Lambay Island in this instance.

43 In relation to wintering populations of the species in the vicinity, the peak count of birds (one individual) within the survey area potentially represents:

- 0.7% of the wintering population at Ireland's Eye, referencing the I-WeBS mean peak count of 136 birds over the period 2013/14 - 2017/18 (See Appendix I).
- 0.5% of the wintering population at Lambay Island, referencing the I-WeBS mean peak count of 200 birds over the period 2013/14 - 2017/18 (See Appendix I).

44 According to Lewis *et al.* (2019), 1% of the international and national populations of cormorant are 1,200 and 110 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of one bird observed in the survey area represents 0.08% of the 1% of the international and 0.91% of the national population of the species.

4.2.1.3 Common Gull *Larus canus* [A182]

Desk Study Results for Common Gull

45 Common gull *Larus canus* [A182] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Dundalk Bay SPA (004026), *c.* 59.4km north-east of the SDZ lands. Dundalk Bay is a large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending some 16 km from Castletown River on the Cooley Peninsula, in the north, to Annagassan/Salterstown in the south. The baseline population of common gull in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 551 birds in the Site Synopsis document (NPWS, 2014c). The site hosts a population of national importance for the species.

46 Considering the distance to the Dundalk Bay SPA, it is unlikely that the individuals recorded within the Clonburris SDZ lands form a part of this, or any other, SPA population. This species is relatively commonly encountered in urban areas during winter months.

47 There are previous records for common gull within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2011.

Field Survey Results for Common Gull

48 Common gull were observed in the survey area on all 10 survey dates (see Figure 5 for locations of records). On the vast majority of survey visits, a small number of birds (<5 birds) were observed flying across the Clonburris SDZ lands. Slightly larger flocks of the species (>5 birds) were observed on three dates between February and March 2021 (full list of observations included in Appendix II of this report). The peak count for common gull foraging and/roosting in or adjacent to the Clonburris SDZ lands was 22 birds at the pond in the Grange Castle Business Park observed on 1st February 2021.

Figure 5 Records of common gull from the wintering bird surveys carried out between October 2020 and March 2021

Common gull at Clonburris SDZ in the context of European sites

49 There are no European sites designated for wintering or breeding populations of common gull within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated site is the Dundalk Bay SPA, located *c.* 59.4km north-east of the survey area.

50 In relation to wintering populations of the species in the vicinity, the peak count of birds (22 individuals) in within the survey area potentially represents:

- 4.1% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 536 birds for the period 2011/2013– 2017/18 (See Appendix I).

51 According to Lewis *et al.* (2019), 1% of the international population of common gull is 16,400 birds. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 22 birds observed in the survey area represents 0.1% of the 1% international population of the species.

4.2.1.4 Coot *Fulica atra* [A125]

Desk Study Results for Coot

52 Coot *Fulica atra* [A125] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Lough Ennell SPA (004044), *c.* 63km north-west of the Clonburris SDZ lands. The European site Lough Ennell is a large, limestone lake located south of Mullingar in Co. Westmeath. The baseline population of coot in the European site, European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 433 birds in the Site Synopsis document (NPWS, 2014d). The site hosts a population of national importance for the species

53 Considering the distance to the Lough Ennell SPA, it is unlikely that the individuals recorded within the Clonburris SDZ lands form a part of this, or any other, SPA population. This species is relatively common in waterbodies of urban areas throughout the year.

54 There are previous records for coot within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2011.

Field Survey Results for Coot

55 Coot were observed within the survey area on four occasions in November 2020 and February and March 2021 (see Figure 6 for locations of records). Three of these observations involved a small number of birds (up to 22 individuals) foraging and swimming in the pond in the Grange Castle Business Park, located adjacent to the Grand Canal and the Clonburris SDZ lands. One of the records were of a perching bird along the Grand Canal. The peak count for coot was from the pond where 22 birds were observed on the 1st February 2021.

Figure 6 Records of coot from the wintering bird surveys carried out between October 2020 and March 2021

Coot at Clonburris SDZ in the context of European sites

56 There are no European sites designated for wintering or breeding populations of coot within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated site is the Lough Ennell SPA, located *c.* 63km north-west of the survey area.

57 In relation to wintering populations of the species in the vicinity, the peak count of birds (22 individuals) in within the survey area potentially represents:

- 16.2% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 136 birds for the period 2011/2013– 2017/18 (See Appendix I).

58 According to Lewis *et al.* (2019), 1% of the international and national populations of coot are 15,500 and 190 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 22 birds observed in the survey area represents 0.14% of the 1% international and 11.6% of the national population of the species.

4.2.1.5 Grey Heron *Ardea cinerea* [A028]

Desk Study Results for Grey Heron

59 Grey heron *Ardea cinerea* [A028] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Wexford Harbour and Slobs SPA (004076), *c.* 93.7km south of the Clonburris SDZ lands. Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region. The site is divided between the natural estuarine habitats of Wexford Harbour, the reclaimed polders known as the North and South 'Slobs', and the tidal section of the River Slaney. The seaward boundary extends from the Rosslare peninsula in the south to the area just west of The Raven Point in the north. The baseline population of grey heron in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 52 birds in the Site Synopsis document (NPWS, 2014e).

60 Considering the distance to the Wexford Harbour and Slobs SPA, and that grey heron are generally sedentary in Ireland, meaning they do not travel long distances between their breeding and wintering grounds[7], the population of birds in the Clonburris SDZ lands are unlikely to form part of this, or any other, European site population.

61 There are previous records for grey heron within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2017.

Field Survey Results for Grey Heron

62 Single grey herons were observed foraging in and along the Grand Canal on seven survey dates (see Figure 7). The birds were also noted flying over the Clonburris SDZ lands and once foraging at a flooded grassland near the Kishoge roundabout.

[7] From information on Grey Heron *Ardea cinerea* published on the BirdWatch Ireland website https://birdwatchireland.ie/birds/grey-Heron/. Accessed 13th June 2021

Figure 7 Records of grey heron from the wintering bird surveys carried out between October 2020 and March 2021

Grey Heron at Clonburris SDZ in the context of European sites

63 There are no European sites designated for wintering or breeding populations of grey heron within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated site is the Wexford Harbour and Slobs SPA, located *c.* 63.7km south of the SDZ lands.

64 In relation to wintering populations of the species in the vicinity, the peak count of birds (one individual) within the survey area potentially represents:

- 4.8% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 42 birds for the period 2011/2013– 2017/18 (See Appendix I).

65 According to Lewis *et al.* (2019), 1% of the international and national populations of grey heron are 5,000 and 25 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of two birds observed in the survey area represents 0.04% of the 1% international and 4% of the national population of the species.

4.2.1.6 Herring Gull *Larus argentatus* [A184]

Desk Study Results for Herring Gull

66 Herring gull *Larus argentatus* [A148] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations are:

- Ireland's Eye SPA (004117), *c.* 23.3km north-east of the SDZ lands. The European site encompasses the island of Ireland's Eye and the surrounding coastal waters. Ireland's Eye is an important breeding site for herring gull, and has a population of 250 birds (NPWS, 2018a).
- Lambay Island SPA (004069), *c.* 29.9km north-east of the SDZ lands. The European site encompasses Lambay Island and its surrounding coastal waters. Lambay Island is an important breeding site for herring gull, and has a population of 1,806 birds (NPWS, 2018b).

67 Considering the distance to the Ireland's Eye SPA and Lambay Island SPA, it is unlikely that the individuals recorded within the Clonburris SDZ lands form a part of this, or any other, SPA population. This species is relatively commonly encountered in urban areas during winter months.

68 There are previous records for herring gull within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record on the NBDC database is from 2012.

Field Survey Results for Herring Gull

69 Herring gull were observed within the survey area on all ten survey dates (see Figure 8 for locations of records). On the vast majority of survey visits, a small number of birds ranging from one individual to up to 22 individuals were seeing flying across the survey area. Larger flocks of the species (29 to 58 individuals) were observed on three dates between February and March 2021 in the pond in the Grange Castle Business Park, adjacent to the Grand Canal and the Clonburris SDZ (full list of observations included in Appendix II of this report). The peak count for herring gull observed within or adjacent to the Clonburris SDZ was 58 individuals observed on the 27th March 2021.

Figure 8 Records of herring gull from the wintering bird surveys carried out between October 2020 and March 2021

Herring Gull at Clonburris SDZ in the context of European sites

70 There are no European sites designated for wintering or breeding populations of herring gull within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated sites are the Ireland's Eye SPA, located *c.* 23.3km north-east, and the Lambay Island SPA, *c.* 29.9km north-east of the survey area.

71 In relation to wintering populations of the species in the vicinity, the peak count of birds within the SDZ potentially represents:

- 12.3% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 471 birds for the period 2011/2013– 2017/18 (See Appendix I).
- 29% of the wintering population at Ireland's Eye, referencing the I-WeBS mean peak count of 200 birds over the period 2011/2013– 2017/18 (See Appendix I).

72 According to Lewis *et al*. (2019), 1% of the international population of herring gull is 14,400 birds. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 58 birds observed in the survey area represents 0.4% of the 1% international population of the species.

4.2.1.7 Lapwing *Vanellus vanellus* [A142] XXEE

Desk Study Results for Lapwing

73 Lapwing *Vanellus vanellus* [A142] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Dundalk Bay SPA (004026), *c.* 59.4km north-east of the Clonburris SDZ lands. The European site is a large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending approximately 16km from Castletown River on the Cooley Peninsula, in the north, to Annagassan/Salterstown in the south. The baseline population of lapwing in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 4,892 birds in the Site Synopsis document (NPWS, 2014c). The site hosts a population of national importance for the species.

74 Considering the distance to the nearest designated site for lapwing and the typical foraging range of species, individuals recorded within the Clonburris SDZ are unlikely to form part of the Dundalk Bay SPA or any other SPA population.

75 There are previous records for lapwing within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record is from 2011.

Field Survey Results for Lapwing

76 Lapwing were observed within the survey area on four of the ten survey dates (see Figure 9 for locations of records). Flocks ranging in size from 5 individuals to 200 were recorded flying over the survey area after taking off from the SDZ lands (full list of observations included in Appendix II of this report). A peak flock of 120 individuals was recorded landed within the Clonburris SDZ towards the centre of the site on 2nd February 2021. A peak count of 200 individuals was recorded flying over the site on the same day.

Figure 9 Records of lapwing from the wintering bird surveys carried out between October 2020 and March 2021

Lapwing at Clonburris SDZ in the context of European sites

77 There are no European sites designated for wintering or breeding populations of lapwing within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated sites is the Dundalk Bay SPA, located *c.* 59.4km north-east of the survey area.

78 In relation to wintering populations of the species in the vicinity, the peak count of birds (up to 200 individuals) within the SDZ potentially represents:

- 327.87% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 61 birds for the period 2011/2013– 2017/18 (See Appendix I).

79 According to Lewis *et al*. (2019), 1% of the international and national populations of lapwing are 72,300 and 850 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 200+ birds observed in the survey area represents 0.28% of the 1% international and 23.5% of the national population of the species.

4.2.1.8 Lesser black-backed gull *Larus fuscus* [A183]

Desk Study Results for Lesser Black-Backed Gull

80 Lesser black-backed gull *Larus fuscus* [A183] is a SCI species for which the following European sites within 20km of the SDZ lands have been designated:

- Poulaphouca Reservoir SPA (004063), *c.* 16.9km south-west of the SDZ lands. This European site is located in the western foothills of the Wicklow Mountains and covers an area of approximately 20 square kilometres. It is the largest inland water body in the mid-east and south-east regions. The baseline population of lesser black-backed gull in the European site, based on the five-year mean

peak counts for the period 1995/96-1999/2000, is listed as 651 birds in the Site Synopsis document (NPWS, 2014f). The site hosts a population of national importance for the species.

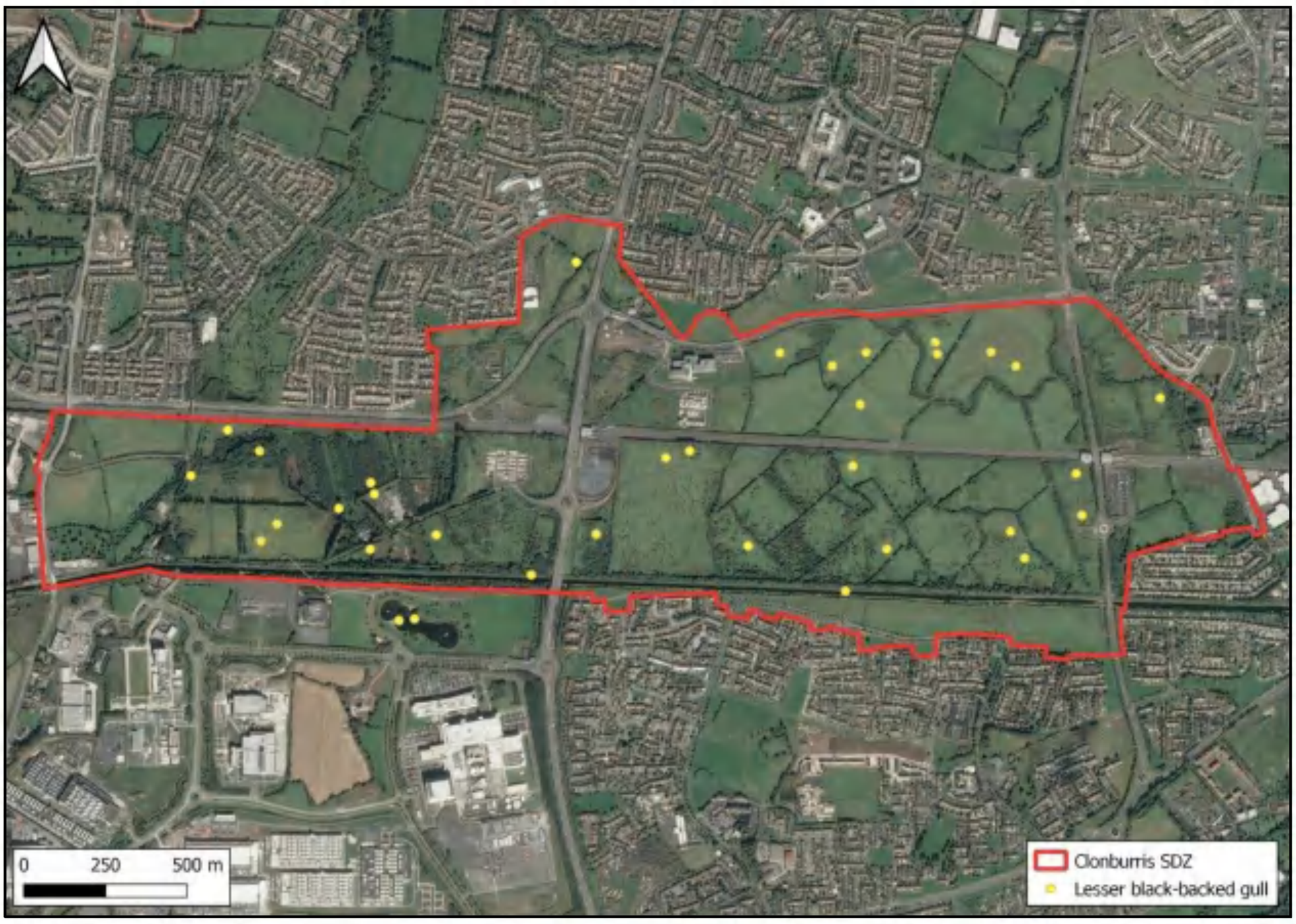
81 Considering the Poulaphouca Reservoir SPA is within c. 20km of the SDZ lands, there is potential that some members of the SPA wintering populations utilise the SDZ lands for forage during the winter months.

82 There are previous records for lesser black-backed gull within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record is from 2011.

Field Survey Results for Lesser black-backed gull

83 Lesser black-backed gull were observed within the survey area on seven of the ten survey dates (see Figure 10 for locations of records). On the vast majority of survey visits, a small number of birds ranging from one individual to up to three individuals were seeing flying across the survey area (full list of observations included in Appendix II of this report). The peak count for lesser black-backed gull, of three individuals, was observed within or adjacent to the Clonburris SDZ on the 30th October 2020, 28th February 2021, 27th March 2021 and 28th March 2021.

Figure 10 Records of lesser black-backed gull from the wintering bird surveys carried out between October 2020 and March 2021



Lesser black-backed gull at Clonburris SDZ in the context of European sites

84 There is one European site designated for wintering populations of lesser black-backed gull within 20km of the Clonburris SDZ lands. The nearest designated sites is the Poulaphouca Reservoir SPA, *c.* 16.9km south-west of the survey area.

85 In relation to wintering populations of the species in the vicinity and the nearest SPA, the peak count of birds (three individuals) within the survey area potentially represents:

- 25% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 12 birds for the period 2011/2013– 2017/18 (See Appendix I).

- 0.5% of the wintering SCI populations of the Poulaphouca Reservoir SPA, referencing the five-year mean peak count for the period 1995/96-1999/2000 of 651 birds in the Conservation Objectives Supporting Document (NPWS, 2014f).

86 According to Lewis *et al*. (2019), 1% of the international population of lesser black-backed gull is 5,500[8] birds. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of three birds observed in the survey area represents 0.05% of the 1% international population of the species.

4.2.1.9 Little grebe *Tachybaptus ruficollis* [A004]

Desk Study Results for Little Grebe

87 Little grebe *Tachybaptus ruficollis* [A004] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Wexford Harbour and Slobs SPA (004076), *c.* 93.7km south of the Clonburris SDZ lands. Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region. The site is divided between the natural estuarine habitats of Wexford Harbour, the reclaimed polders known as the North and South 'Slobs', and the tidal section of the River Slaney. The seaward boundary extends from the Rosslare peninsula in the south to the area just west of The Raven Point in the north. The baseline population of little grebe in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 82 birds in the Site Synopsis document (NPWS, 2014e).

88 Considering the distance to the nearest designated site for little grebe and the typical foraging range of species, individuals recorded within the Clonburris SDZ are unlikely to form part of the Wexford Harbour and Slobs SPA or any other SPA population.

89 There are previous records for little grebe within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record is from 2012.

Field Survey Results for Little Grebe

90 Little grebe were observed within the survey area on seven of the ten survey dates (see Figure 11 for locations of records). A small number of birds ranging from one individual to up to six individuals were observed swimming and along the Grand Canal on five survey dates. The birds were also noted in the pond in the Grange Castle Business Park, adjacent to the Grand Canal and the Clonburris SDZ. At this pond a peak count of eight individuals was observed on 28th February 2021.

[8] *graellsii*, W. Europe (br)

Figure 11 Records of little grebe from the wintering bird surveys carried out between October 2020 and March 2021

Little grebe at Clonburris SDZ in the context of European sites

91 There are no European sites designated for wintering or breeding populations of little grebe within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated sites is the Wexford Harbour and Slobs SPA, *c.* 93.7km south of the survey area.

92 In relation to wintering populations of the species in the vicinity, the peak count of birds (eight individuals) within the survey area potentially represents:

- 266.67% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of three birds for the period 2011/2013– 2017/18 (See Appendix I).

93 According to Lewis *et al*. (2019), 1% of the international and national populations of little grebe are 4,700 and 20 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of eight birds observed in the survey area represents 0.2% of the 1% international and 40% of the national population of the species.

4.2.1.10 Mallard Anas platyrhynchos [A053]

Desk Study Results for Mallard

94 Mallard *Anas platyrhynchos* [A053] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European sites designated for their populations is:

- Dundalk Bay SPA (004026), *c.* 59.4km north-east of the Clonburris SDZ lands. The European site is a large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending

approximately 16km from Castletown River on the Cooley Peninsula, in the north, to Annagassan/Salterstown in the south. The baseline population of mallard in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 765 birds in the Site Synopsis document (NPWS, 2014c). The site hosts a population of national importance for the species.

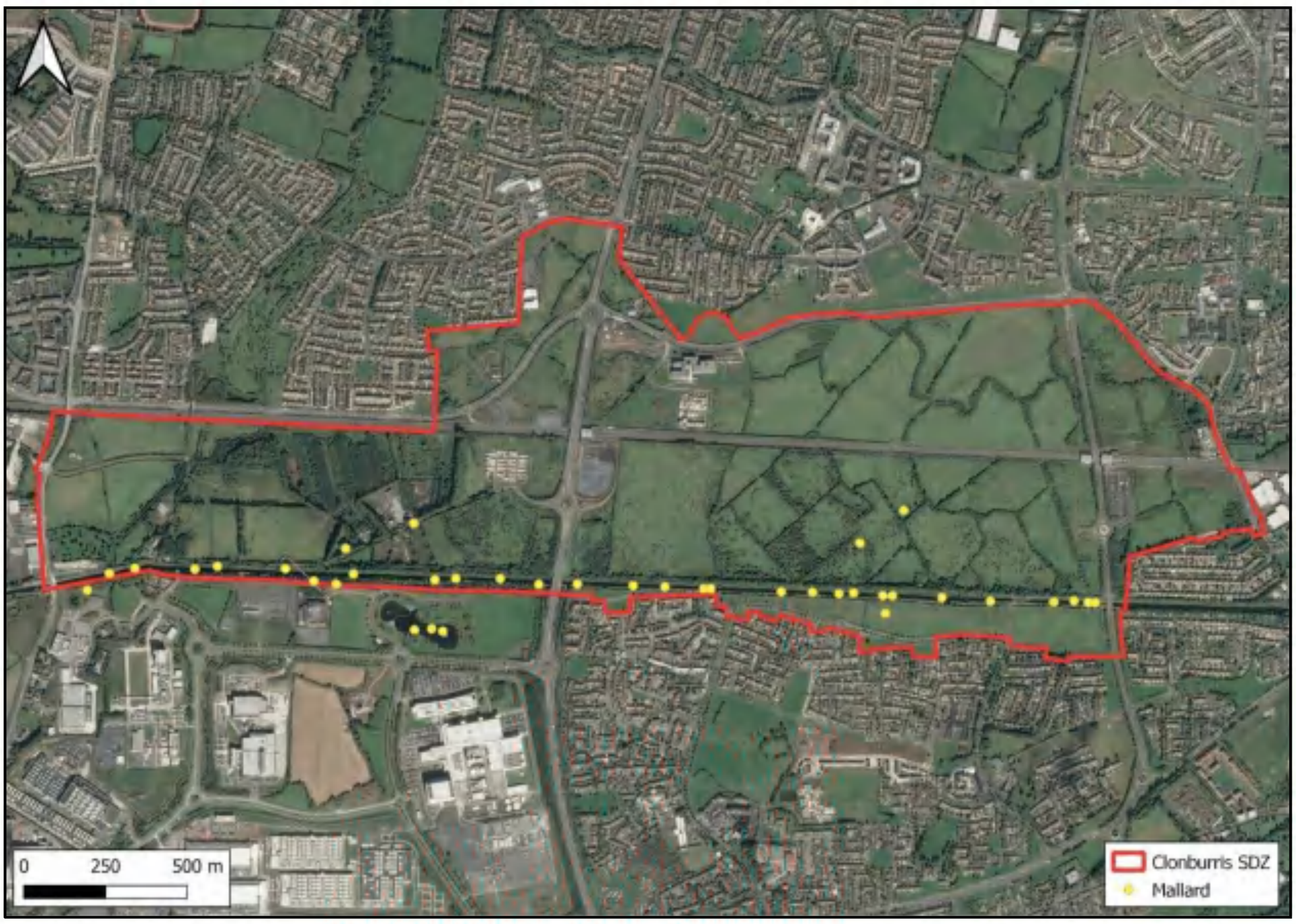
95 Considering the distance to the nearest designated site for mallard and the typical foraging range of species, individuals recorded within the Clonburris SDZ are unlikely to form part of the Dundalk Bay SPA or any other SPA population.

96 There are previous records for mallard within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record is from 2016.

Field Survey Results for Mallard

97 Mallard were observed within the survey area on eight of the ten survey dates (see Figure 12 for locations of records). A small number of birds ranging from one individual to up to nine individuals were observed along the Grand Canal on eight dates between October 2020 and March 2021. Mallard were recorded on three survey dates between February and March 2021 in the pond in the Grange Castle Business Park, adjacent to the Grand Canal and the Clonburris SDZ. At this pond a peak count of 57 individuals was observed on 1st February 2021.

Figure 12 Records of mallard from the wintering bird surveys carried out between October 2020 and March 2021



Mallard at Clonburris SDZ in the context of European sites

98 There are no European sites designated for wintering or breeding populations of mallard within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form

part of SPA populations. The nearest designated sites is the Dundalk Bay SPA, located *c.* 59.4km north-east of the survey area.

99 In relation to wintering populations of the species in the vicinity and the nearest SPA, the peak count of birds (57 individuals) within the survey area potentially represents:

- 56.4% of the wintering population in Dublin Bay, referencing the I-WeBS mean peak count of 101 birds for the period 2011/2013– 2017/18 (See Appendix I).

100 According to Lewis *et al*. (2019), 1% of the international and national population of mallard are 53,000 and 280 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 57 birds observed in the survey area represents 0.1% of the 1% international and 20.4% of the national population of the species.

4.2.1.11 Tufted Duck *Aythya fuligula* [A067]

Desk Study Results for Tufted Duck

101 Tufted duck *Aythya fuligula* [A067] is a SCI species for which there are no European sites designated for their wintering populations within 20km of the Clonburris SDZ lands. The nearest European site designated for their populations is:

- Lough Ennell SPA (004044), *c.* 63km north-west of the Clonburris SDZ lands. The European site is a large, limestone lake located south of Mullingar in Co. Westmeath. It has a length of approximately 6.5km along its long axis and is mostly about 2km wide.The baseline population of tufted duck in the European site, based on the five-year mean peak counts for the period 1995/96-1999/2000, is listed as 1,303 birds in the Site Synopsis document (NPWS, 2014d). The population of tufted duck represents over 3% of the all-Ireland population. The site hosts a population of national importance for the species.

102 Considering the distance to the nearest designated site for tufted duck and the typical foraging range of species, individuals recorded within the Clonburris SDZ are unlikely to form part of the Lough Ennell SPA or any other SPA population.

103 There are previous records for tufted duck within *c.* 2km of the Clonburris SDZ lands on the NBDC database. The most recent record is from 2011.

Field Survey Results for Tufted Duck

104 Tufted duck were observed within the survey area on three of the ten survey dates (see Figure 13 for locations of records). A small number of birds ranging from two individuals to up to fourteen individuals were recorded on three survey dates between February and March 2021 in the pond in the Grange Castle Business Park, adjacent to the Grand Canal and the Clonburris SDZ. At this pond a peak count of 14 individuals was observed on 1st February 2021.

Figure 13 Records of tufted duck from the wintering bird surveys carried out between October 2020 and March 2021

Tufted duck at Clonburris SDZ in the context of European sites

105 There are no European sites designated for wintering or breeding populations of tufted duck within 20km of the Clonburris SDZ lands, and therefore the individuals recorded within the survey area are unlikely to form part of SPA populations. The nearest designated sites is Lough Ennell SPA, located *c.* 63km north-west of the survey area.

106 In relation to wintering populations of the species in the vicinity, the peak count of birds (14 individuals) within the survey area potentially represents:

- 1,400% of the wintering population in the Grand Canal, referencing the I-WeBS mean peak count of 1 individual bird for the period 2011/2013– 2017/18 (See Appendix I).

107 According to Lewis *et al*. (2019), 1% of the international and national populations of tufted duck are 8,900 and 270 birds, respectively. The peak count of birds utilising the survey area did not reach or exceed this number in the 2020/21 survey season. The peak count of 14 birds observed in the survey area represents 0.15% of the 1% international and 5.2% of the national population of the species.

4.3 Other Species (Non-SCI Species)

4.3.1 Non-SCI Wetland Bird Species

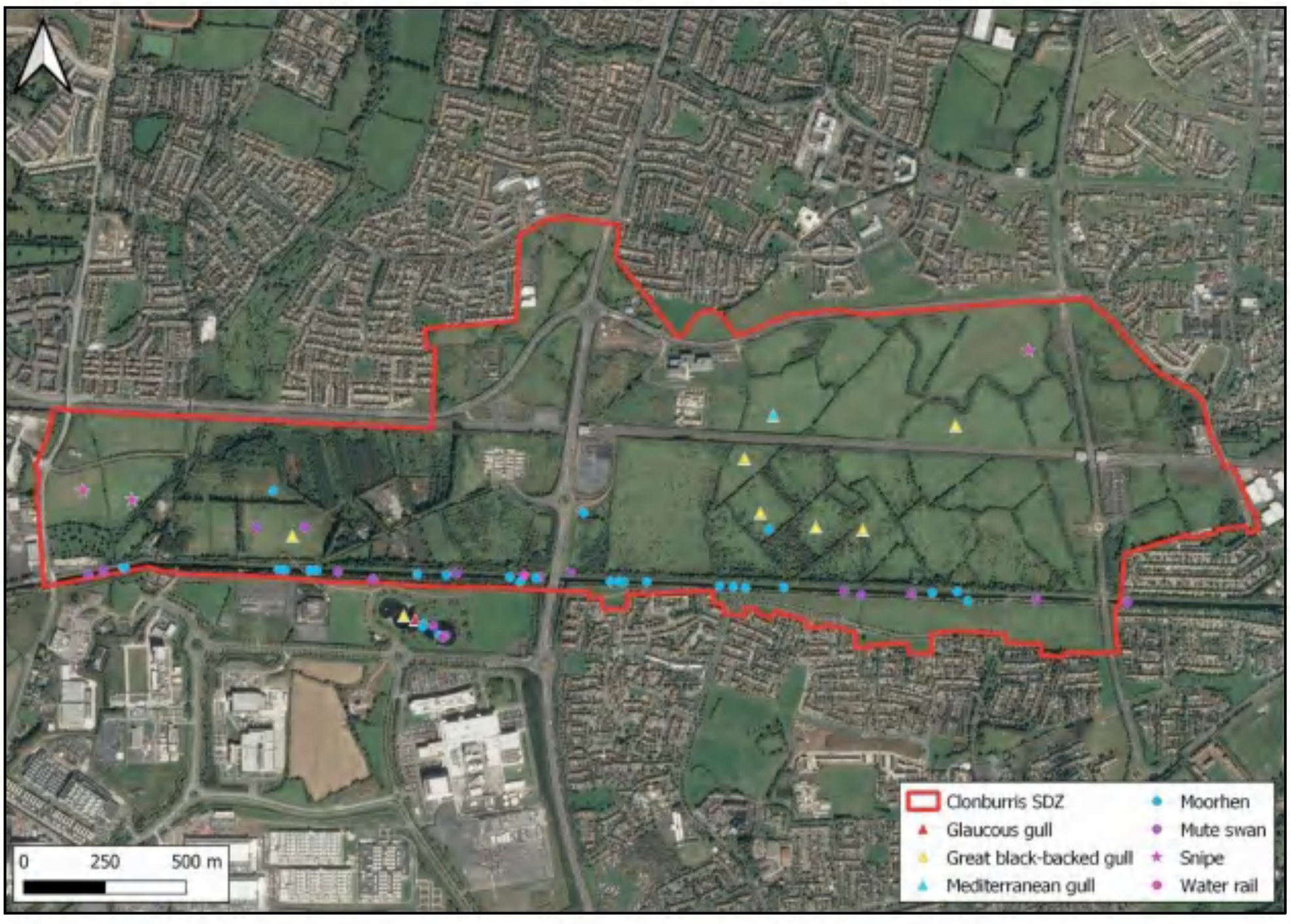
108 In addition, to the wintering SCI species, the following non-SCI wetland bird species were also recorded at the Clonburris SDZ lands and its immediate vicinity (see Figure 14 for locations of records): great-black backed gull *Larus marinus,* Mediterranean gull *Ichthyaetus melanocephalus,* moorhen *Gallinula chloropus,* mute swan *Cygnus olor, s*nipe *Gallinago gallinago* and water rail *Rallus aquaticus.* A rarer wintering bird species which is infrequently recorded in Ireland, glaucous gull *Larus hyperboreus*, was also encountered

in the Clonburris SDZ lands during the wintering bird surveys. This species is a scarce winter visitor of higher latitudes.

109 Of the above species, one (snipe) is Red-listed (i.e. of High Conservation Concern), and two (Mediterranean gull and mute swan) Amber-listed (i.e. of Medium Conservation Concern) on the Bird of Conservation Concern in Ireland[1]. The remaining species are Green-listed, i.e. of low conservation concern. Mediterranean gull is also listed on the Annex I of the Birds Directive, however there are no European sites designated for this species in Ireland.

110 None of these species were present in flocks that would represent 1% of the international and/or the national population of their species.

Figure 14 Records of non-SCI wetland bird species from the wintering bird surveys carried out between October 2020 and March 2021



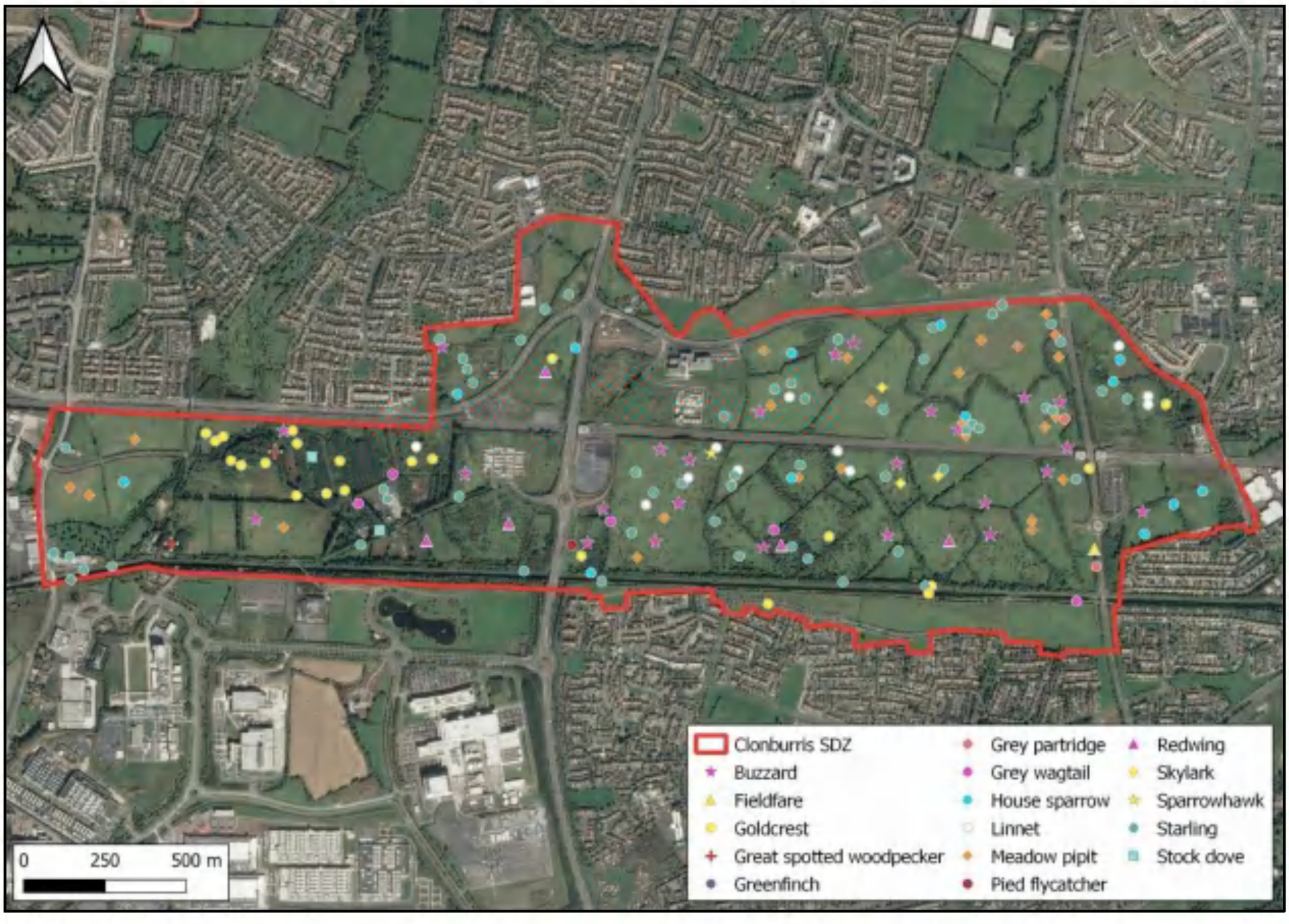
4.3.2 Other Non-SCI Species

111 Wintering bird survey methodologies, such as that used for I-WeBS, generally do not require you to record other than wetland bird species, although, for example some passerine species migrate in Ireland from mainland to spend their winter here. Other species recorded during the wintering bird surveys included (see Figure 15 for locations of records) : fieldfare *Turdus pilaris*, goldcrest *Regulus regulus*, greenfinch *Carduelis chloris*, grey wagtail *Motacilla cinerea*, house sparrow *Passer domesticus*, linnet *Carduelis cannabina*, meadow pipit *Anthus pratensis*, pied flycatcher *Ficedula hypoleuca*, redwing *Turdus iliacus*, robin *Erithacus rubecula*, skylark *Alauda arvensis* and starling *Sturnus vulgaris.* In addition, great spotted woodpecker *Dendrocopus major* and stock dove *Columba oenas* were recorded twice each in the woodlands in the western section, and grey partridge *Perdix perdix* once in the grasslands in the far eastern section, of the Clonburris SDZ lands. Raptor species buzzard *Buteo buteo* was recorded 25 times across the Clonburris SDZ lands and its immediate vicinity, and sparrowhawk *Accipiter nisus* once in the grasslands east of the Kishoge station. Of the aforementioned species, fieldfare and redwing, are regular winter

visitors from Northern Europe, whereas others can be encountered in Ireland throughout the year, although some individuals recorded during the wintering bird surveys may belong to migratory populations of the mainland Europe.

112 Of the above species, five (grey partridge, grey wagtail, meadow pipit, redwing and stock dove) are Red-listed (i.e. of High Conservation Concern), and seven (goldcrest, greenfinch, house sparrow, linnet, pied flycatcher, skylark and starling) Amber-listed (i.e. of Medium Conservation Concern) on the Bird of Conservation Concern in Ireland[1]. The remaining species are Green-listed, i.e. of low conservation concern.

Figure 15 Records of other non-SCI species from the wintering bird surveys carried out between October 2020 and March 2021



4.4 Disturbance

113 With regard to disturbance during the wintering bird surveys, most of the Clonburris SDZ lands are open to public, and for all of the 2020/21 winter bird survey season, walkers, dog walkers and cyclists were regularly present within the survey area throughout each survey visit.

114 Considering the wintering bird surveys were carried out as walked transects rather than carrying them out from vantage point surveys, and the scarcity of wintering birds within the Clonburris SDZ lands, disturbance events were not recorded separately.

5 Conclusions

115 Wintering bird surveys carried out between November 2020 and March 2021 recorded 34 species in the Clonburris SDZ lands and its immediate vicinity. Of these species, 12 were wintering species listed as SCIs of nearby European sites, of which one species is Red-listed (i.e. of High Conservation Concern) and eight species Amber-listed (i.e. of Medium Conservation Concern) on the Bird of Conservation Concern in Ireland[1]. In addition, eight non-SCI wetland bird species and 17 other bird species (e.g. passerines and raptors), of which six are Red-listed and nine Amber-listed, were recorded within or immediately adjacent to the Clonburris SDZ lands during the surveys.

116 Observations of SCI and non-SCI wetland wintering bird species within the survey area were contextualised against the populations of these species in nearby European sites (SCI species only) and/or against their numbers in terms of international and national population thresholds, where available. The peak counts of these species present in the survey area during the wintering bird surveys were less than 1% of the international population. With regard to the national population thresholds for these species, the numbers of five species exceeded the 1% of the national threshold: coot (present at 11.6% of the national population of the species), lapwing (23.5%), little grebe (40%), mallard (20.4%) and tufted duck (5.2%). It should be noted that the records for peak counts exceeding the national threshold for coot, little grebe, mallard and tufted duck were from outside the Clonburris SDZ lands, from the pond in the Grange Castle Business Park, leaving lapwing as the only species whose numbers exceeded the national threshold within the Clonburris SDZ land.

117 Lapwing is a bird species of High Conservation Concern which has seen long-term declines since the beginning of I-WeBS counts (Lewis *et al.*, 2019). Lapwing was present in the Clonburris SDZ lands in flock sizes varying mostly between 30 and up to 200+ individuals, with one flock consisting of only five individuals. In addition to the peak count of lapwings exceeding the national threshold for the species, the numbers recorded present over three times the I-WeBS peak count numbers recorded in Dublin Bay for the period of 2011/13 – 2017/18. Considering they are known to spend winters in non-wetland habitats, such as grasslands, away from European sites designated for them (Lewis *et al.*, 2019), and they were present in comparatively large flock sizes in the Clonburris SDZ, the grasslands within the Clonburris SDZ lands represent a relatively large, undisturbed feeding and/or roosting resource for lapwing in a largely built up area in the Greater Dublin Area.

118 In conclusion, the Clonburris SDZ and lands in its immediate vicinity support a variety of gull, wader and waterfowl species during winter months, with the most notable species of them being the Red-listed lapwing that can be present in large flocks. Considering these flocks of lapwing comprised of more than 1% of the national populations on one occasion, the Clonburris SDZ lands are deemed to be of local importance to this particular species. This conclusion takes into consideration the relatively small area of suitable habitat contained within the SDZ lands in comparison to suitable habitat found to the west of the Clonburris SDZ.

119 The survey findings of this report will be valid for approximately 12-18 months following the Chartered Institute of Ecology and Environmental Management (CIEEM) *Advice Note On the Lifespan of Ecological Reports & Surveys* (CIEEM, 2019)[9].

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[9] CIEEM (2019). *Advice Note on the Lifespan of Ecological Reports & Survey*. Available online at https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

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Appendix I – Desk Study Results

Wetland Bird Survey Records for O03 10km Grid Square, returned from the National Biodiversity Data Centre Database

A search for all species records contained within the O03 10km grid square was returned on 20th July 2021 The records have been reviewed by Emmi Virkki of Scott Cawley and only records relating to wetland birds are presented in the table, below. A proportion of records are of rare / vagrant species and / or historical records.

Appendix I - Table 1: Wetland bird records for the 10km grid square O03, as returned from the NBDC database

[illegible]	Record count	Date of last record	[illegible]
Black-crowned Night Heron *Nycticorax nycticorax*	1	08/11/1865	Rare birds of Ireland
Black-headed Gull *Chroicocephalus ridibundus*	17	25/10/2013	Birds of Ireland
Common Coot *Fulica atra*	11	31/12/2011	Bird Atlas 2007 - 2011
Common Crane *Grus grus*	2	25/06/2009	Rare birds of Ireland
Common Moorhen *Gallinula chloropus*	29	16/09/2017	Birds of Ireland
Common Pochard *Aythya ferina*	4	31/12/2011	Bird Atlas 2007 - 2011
Common Redshank *Tringa totanus*	2	31/12/2011	Bird Atlas 2007 - 2011
Common Snipe *Gallinago gallinago*	6	17/12/2016	Birds of Ireland
Eurasian Curlew *Numenius arquata*	2	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Eurasian Oystercatcher *Haematopus ostralegus*	1	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Eurasian Teal *Anas crecca*	4	31/12/2011	Bird Atlas 2007 - 2011
Eurasian Wigeon *Anas penelope*	3	31/12/2011	Bird Atlas 2007 - 2011
Eurasian Woodcock *Scolopax rusticola*	1	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
European Golden Plover *Pluvialis apricaria*	3	31/12/2011	Bird Atlas 2007 - 2011
Gadwall *Anas strepera*	2	31/12/2011	Bird Atlas 2007 - 2011
Goosander *Mergus merganser*	2	31/12/2011	Bird Atlas 2007 - 2011
Great Black-backed Gull *Larus marinus*	4	31/12/2011	Bird Atlas 2007 - 2011
Great Cormorant *Phalacrocorax carbo*	15	30/04/2015	Birds of Ireland
Great Crested Grebe *Podiceps cristatus*	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Grey Heron *Ardea cinerea*	34	29/08/2017	Birds of Ireland
Herring Gull *Larus argentatus*	10	18/05/2012	Ireland's BioBlitz

Iceland Gull *Larus glaucoides*	1	31/12/2011	Bird Atlas 2007 - 2011
Lesser Black-backed Gull *Larus fuscus*	4	31/12/2011	Bird Atlas 2007 - 2011
Little Egret *Egretta garzetta*	4	12/10/2017	Birds of Ireland
Little Grebe *Tachybaptus ruficollis*	17	19/05/2012	Ireland's BioBlitz
Mallard *Anas platyrhynchos*	43	13/03/2016	Birds of Ireland
Mandarin Duck *Aix galericulata*	2	15/04/2015	Birds of Ireland
Mew Gull *Larus canus*	6	31/12/2011	Bird Atlas 2007 - 2011
Mute Swan *Cygnus olor*	19	31/12/2011	Bird Atlas 2007 - 2011
Northern Lapwing *Vanellus vanellus*	6	31/12/2011	Bird Atlas 2007 - 2011
Northern Pintail *Anas acuta*	2	31/12/2011	Bird Atlas 2007 - 2011
Tufted Duck *Aythya fuligula*	13	31/12/2011	Bird Atlas 2007 - 2011
Whiskered Tern *Chlidonias hybrida*	1	31/12/1839	Rare birds of Ireland
Whooper Swan *Cygnus cygnus*	1	31/12/2011	Bird Atlas 2007 - 2011

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U310 Grand Canal (Dublin)

The mean is based only on the most recent 5-season period, *i.e*. for the period 2013/14 - 2017/18. Columns populated left blank indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 2: I-WeBS summary data for 0U310 Grand Canal (Dublin)

[illegible]	[illegible] national	[illegible] international	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mute Swan	90.00	100.00				17*				92	105	95	97
Light-bellied Brent Goose	350.00	400.00				15*							0
Mallard	280.00	53000.00				62*				79	103	80	87
Feral/hybrid Mallard type						7*				2	6		3
Tufted Duck	270.00	8900.00								2	1	1	1
Cormorant	110.00	1200.00				1*				2	2	1	2
Grey Heron	25.00	5000.00				1*				4	6	2	4
Moorhen						26*				36	66	32	45
Coot	190.00	15500.00				1*						1	0
Black-headed Gull						144*				111	271	157	180
Common Gull						29*					1	1	1
Lesser Black-backed Gull						4*					1		0
Herring Gull						62*				1	9	33	14
Great Black-backed Gull						5*							0

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U403 Baldoyle Bay

The mean is based only on the most recent 5-season period, *i.e*. for the period 2013/14 - 2017/18. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 3: I-WeBS summary data for OU403 Baldoyle Bay

[redacted]	[redacted] National	[redacted] International	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Arctic Tern			8	24									0
Bar-tailed Godwit	170	1500	131	105				162	150	48	59	38	91
Black-headed Gull								242	281	52	120	13	142
Black-tailed Godwit	200	1100	175	270				389	139	296	172	189	237
Common Gull								64	11	4	61	3	29
Common Sandpiper				2									0
Common Scoter	110	7500	27	130				16	7				5
Common Tern			12	52									0
Cormorant	110	1200	14	20				10	4	3	4	1	4
Curlew	350	7600	138	148				90	61	106	49	44	70
Curlew Sandpiper			4	12									0
Dunlin	460	13300	300	110				750	233	300	403	537	445
Egyptian Goose										1			0
Golden Plover	920	9300	750	672				2500	450	2000	1200		1230
Goldeneye	40	11400		15									0
Great Black-backed Gull								7	15	10	9	9	10

[illegible]	[illegible] National	[illegible] International	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Great Crested Grebe	30	6300	22	63				124	189				63
Great Northern Diver	20	50	2	5				1	2				1
Green Sandpiper			2	1									0
Greenshank	20	3300	32	25				6	11	3	6	7	7
Grey Heron	25	5000	14	32				5	7	7	4	6	6
Grey Plover	30	2000	112	166				55	28	8	25	10	25
Herring Gull								47	91	58	112	48	71
Kingfisher			2	3									0
Knot	160	5300	47	112				553		19	600	800	394
Lapwing	850	72300	287	550				372	300	137	392	180	276
Lesser Black-backed Gull								4	18	1	1	1	5
Light-bellied Brent Goose	350	400	1120	956				580	588	342	753	663	585
Little Egret	20	1100	40	56				18	3	7	21	25	15
Little Grebe	20	4700		5				1				3	1
Long-tailed Duck				2									0
Mallard	280	53000	193	249				67	102	106	71	60	81
Mute Swan	90	100								2		2	1
Oystercatcher	610	8200	1014	880				277	1113	219	117	144	374
Pintail	20	600	23	12				4	4				2

[illegible]	[illegible] National	[illegible] International	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Red-breasted Merganser	25	860	14	23				6	5	2	4		3
Redshank	240	2400	330	284				144	152	125	96	154	134
Red-throated Diver	20	3000	5	2				14	64				16
Ringed Plover	120	540	150	168				34	59	123	4		44
Roseate Tern				12									0
Sanderling	85	2000	31	29				6					1
Sandwich Tern			37	31									0
Shag								7			1		2
Shelduck	100	2500	357	238				52	97	88	127	105	94
Shoveler	20	650									1		0
Snipe			17										0
Teal	360	5000	163	218				145	160	108	131	48	118
Turnstone	95	1400	126	139				17	12	13	10	4	11
Whimbrel			1	7									0
Wigeon	560	14000	125	178				54	54	32	266	332	148

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U408 Broadmeadow (Malahide) Estuary

The mean is based only on the most recent 5-season period, *i.e*. for the period 2013/14 - 2017/18. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 4: I-WeBS summary data for OU408 Broadmeadow (Malahide) Estuary

[illegible]	[illegible] National	[illegible] International	[illegible] 9	[illegible] 0	[illegible] 1	[illegible] 2	[illegible] 3	[illegible] 4	[illegible] 5	[illegible] 6	[illegible] 7	[illegible] 8	[illegible]
Mute Swan	90	100	110	114	108	90	47	50	89	58	66	61	65
Whooper Swan	150	340	9			2		1					0
Black Swan									1				0
Greenland White-fronted Goose	100	190			1								0
Bar-headed Goose				1	1								0
Barnacle Goose	160	810			1								0
Light-bellied Brent Goose	350	400	1856	898	1411	943	1980	710	464	824	1565	1000	913
Shelduck	100	2500	246	341	479	8	262	120	222	303	569	321	307
Wigeon	560	14000	150	42	168		157		2	67	94	215	76
Gadwall	20	1200			2		120	4				4	2
Teal	360	5000	142	99	670	41	112	119	87	141	232	196	155
Mallard	280	53000	178	176	379	95	220	112	92	92	134	110	108
Pintail	20	600	72	66	72		29	6		15	23	39	17
Shoveler	20	650	14	6	50					9	24	30	13
Pochard	110	2000	18	35	8		2						0
Tufted Duck	270	8900	2	15	8				1				0
Scaup	25	3100	1		4				3		5	1	2
Long-tailed Duck					1		3				1		0
Common Scoter	110	7500	300	278			30						0

Goldeneye	40	11400	105	126	93	51	66	36	92	31	43	50	50
Red-breasted Merganser	25	860	39	161	78	87	57	80	35	26	237	23	80
[illegible]	National	International	9	0	1	2	3	4	5	6	7	8	[illegible]
Ruddy Duck					1								0
Red-throated Diver	20	3000	8				4					3	1
Great Northern Diver	20	50		3				3		2			1
Little Grebe	20	4700	8	13	28	23	21	8	33	26	33	84	37
Great Crested Grebe	30	6300	96	54	44	34	120	60	72	84	83	54	71
Slavonian Grebe											1		0
Cormorant	110	1200	58	42	28	6	101	101	42	86	127	99	91
Shag			130	66	30		32	8	9	5	12	2	7
Little Egret	20	1100	26	17	3	2	17	13	16	35	35	22	24
Grey Heron	25	5000	28	77	20	12	19	19	27	26	30	21	25
Moorhen			3	7	12	4	4	6	9	4	3	6	6
Coot	190	15500	2		12								0
Oystercatcher	610	8200	1529	1285	1471	78	1300	1833	1355	1291	1523	1242	1449
Ringed Plover	120	540	16	14	25		71			13	152	240	81
Golden Plover	920	9300	1310	72	1000	260	1000	200	5		337	36	116
Grey Plover	30	2000	155	150	169	3	140	9	6	100	38	82	47
Lapwing	850	72300	434	315	642	1180	900	590	681	63	331	213	376
Knot	160	5300	331	354	870	4	440	110	49	9	202	800	234

Sanderling	85	2000	4		1		2	80	46		13	2	28
Curlew Sandpiper							2						0
Dunlin	460	13300	1173	416	1365	23	480	94	121	300	1489	445	490
Ruff			4	1	1	4	1	2	5			1	2
Jack Snipe							1					1	0
Snipe			44	5	46	20	25	56	25	36	25	3	29
Black-tailed Godwit	200	1100	366	478	258	296	355	206	167	121	293	245	206
Bar-tailed Godwit	170	1500	200	358	286	62	213	133	14	60	93	107	81
Curlew	350	7600	240	545	330	1	500	244	83	246	363	349	257
[illegible]	**National**	**International**	**9**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	[illegible]
Common Sandpiper			6	3	4	1	17		1				0
Green Sandpiper								27					5
Spotted Redshank			1						1				0
Greenshank	20	3300	59	29	26	26	43	64	30	34	46	43	43
Redshank	240	2400	589	459	364	87	374	171	130	363	487	575	345
Turnstone	95	1400	139	175	175	23	221	94	85	75	79	98	86
Little Gull			1										0
Black-headed Gull			1072	930	565	479	368	659	571	496	424	294	489
Common Gull			221	187	228	149	70	71	16	184	75	126	94
Lesser Black-backed Gull			28	5	5	4	3	15	8	196	20	6	49
Herring Gull			77	66	68	55	139	110	95	118	187	389	180

Iceland Gull						2							0
Great Black-backed Gull			18	20	20	15	44	93	9	42	71	69	57
Sandwich Tern			26	84	3	2	50	12		2	42		11
Common Tern				1									0

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U407 Rogerstown Estuary

The mean is based only on the most recent 5-season period, *i.e.* for the period 2012/13 – 2017/18. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 5: I-WeBS summary data for OU407 Rogerstown Estuary

[illegible]	1% National	1% International	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mute Swan	90	100	6	3			4	2	2	2	2	2	2
Whooper Swan	150	340			2					12	13	1	5
Pink-footed Goose										8			2
Greenland White-fronted Goose	100	190				3							0
Greylag Goose	35	980	87	134	19	33	89	5	33	95	30	17	36
Barnacle Goose	160	810	1										0
Brent Goose			1										0
Dark-Bellied Brent Goose								1					0
Light-bellied Brent Goose	350	400	2652	2749	1051	2661	1395	2217	1047	2662	2829	2197	2190
Ruddy Shelduck				1									0
Shelduck	100	2500	809	886	730	752	793	877	652	624	687	531	674
Wigeon	560	14000	580	690	490	813	585	686	1342	1532	1094	1695	1270
Gadwall	20	1200	1				2		3	2	4	7	3
Teal	360	5000	1054	1003	1448	1211	1469	685	2008	967	857	1280	1159
Mallard	280	53000	248	319	109	182	198	172	260	220	168	174	199
Pintail	20	600	16	6	2		1		4	5	2		2
Shoveler	20	650	79	36	21	26	34	42	15	25	33	20	27
Pochard	110	2000	2										0
Scaup	25	3100		27									0

[illegible]	1% National	1% International	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Eider	55	9800										1	0
Common Scoter	110	7500									8		2
Goldeneye	40	11400	1	1	1		6						0
Red-breasted Merganser	25	860	26	30	16	30	22	20	39	23	36	25	29
Red-throated Diver	20	3000	2	1		4	1	2	4	1	1	1	2
Great Northern Diver	20	50	1					2					0
Little Grebe	20	4700	12	18	10	24	15	15	22	25	15	20	19
Great Crested Grebe	30	6300	3	46	1	4	14	5	22	3	2	1	7
Cormorant	110	1200	55	77	23	17	33	32	21	27	29	53	32
Shag			28	28	44	40	47	36	21	11	10	17	19
Little Egret	20	1100	41	42	1	43	48	57	46	55	43	52	51
Grey Heron	25	5000	34	24	6	24	24	17	21	16	20	20	19
Great White Egret										1			0
Glossy Ibis											1		0
Spoonbill											3		1
Water Rail			1	1						1			0
Moorhen				3		1	1	8	5	2	2	3	4
Coot	190	15500					2	3		2	3	4	2
Oystercatcher	610	8200	1199	2024	1781	2116	2491	1531	1519	1697	1057	1161	1393
Ringed Plover	120	540	190	153	113	105	284	167	161	125	144	215	162
American Golden Plover				1									0
Golden Plover	920	9300	6590	664	40	530	3300	130	2000	2050	2152	700	1406
Grey Plover	30	2000	283	223	210	371	242	151	120	64	199	192	145
Lapwing	850	72300	5820	1268	710	2855	5805	897	2099	5185	2845	1290	2463

[illegible]	1% National	1% International	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Knot	160	5300	500	501	88	190	256	30	130	89	12	175	87
Sanderling	85	2000	14	30	6	20	300	31	1	130	76	35	55
Little Stint			1			1		3		1			1
Curlew Sandpiper				6		1	4			1		1	0
Purple Sandpiper	20	110	7	76	5	6	3	72	32	4	3		22
Dunlin	460	13300	2546	3151	1061	1904	1860	581	2264	3469	2356	1381	2010
Ruff				1			1			2	2	9	3
Jack Snipe											2		0
Snipe			35	37	10	4	20	9	5	24	8	8	11
Woodcock								1					0
Black-tailed Godwit	200	1100	1138	568	148	450	883	597	237	191	1113	1201	668
Bar-tailed Godwit	170	1500	31	126	1	76	44	120	149	99	676	100	229
Whimbrel			1	2		2	28	1	1	1	3	16	4
Curlew	350	7600	1055	803	33	922	518	684	600	625	530	888	665
Common Sandpiper			2										0
Green Sandpiper										1			0
Spotted Redshank			1	1			1						0
Greenshank	20	3300	40	50	14	83	32	36	35	59	64	48	48
Lesser Yellowlegs									1				0
Redshank	240	2400	907	987	378	1104	689	844	945	1007	597	880	855
Turnstone	95	1400	77	81	95	176	224	207	110	223	84	173	159
Mediterranean Gull				1			1	1			1		0
Black-headed Gull			764	1314	136	457	310	602	448	458	428	391	465
Common Gull			80	419	73	142	175	256	343	159	247	152	231

[redacted]	1% National	1% International	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Lesser Black-backed Gull			3	29	35	76	3	1	38	9	4	11	13
Herring Gull			906	596	45	739	189	237	300	332	488	1405	552
Great Black-backed Gull			170	119	16	107	84	106	37	53	109	27	66
Sandwich Tern			70	100			104	58	245	82	25	14	85
Roseate Tern							1						0
Common Tern			2					1	4	41			9
Kingfisher			1	1		1	12	2	1		5	1	2
SPECIES	1% NATIONAL	1% INTERNATIONAL	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	MEAN
Mute Swan	90	100	6	3			4	2	2	2	2	2	2

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U951 Ireland's Eye

The mean is based only on the most recent 5-season period, *i.e*. for the period 2010/11 - 2014/15. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 6: I-WeBS summary data for OU951 Ireland's Eye

[illegible]	1% National	1% International	2008/09	2009/10	[illegible]	[illegible]	2012/13	2013/14	2014/15	[illegible]	2016/17	2017/18	[illegible]
Black-headed Gull								50		6			19
Common Gull			10					60					20
Cormorant	110	1200	20					200		150			117
Curlew	350	7600	25					30	6*	5			12
Dunlin	460	13300						10					3
Great Black-backed Gull			200					250	200*	200			150
Greenshank	20	3300	1					1		2			1
Grey Heron	25	5000	2					1		1			1
Herring Gull			200					300	200*	300			200
Light-bellied Brent Goose	350	400	50					100		200			100
Little Egret	20	1100	2							1			0
Mallard	280	53000						5					2
Mediterranean Gull									1*				0
Oystercatcher	610	8200	100					200	150*	100			100
Purple Sandpiper	20	110	5					10		15			8
Redshank	240	2400	10					25	10*	25			17
Red-throated Diver	20	3000						2					1
Ringed Plover	120	540						10	5*	4			5
Sanderling	85	2000						60					20
Sandwich Tern			2						15*				0

[illegible]	1% National	1% International	2008/09	2009/10	[illegible]	[illegible]	2012/13	2013/14	2014/15	[illegible]	2016/17	2017/18	[illegible]
Shag								150		60			70
Shelduck	100	2500								20			7
Turnstone	95	1400	60					80	20*	150			77
Whimbrel			2							1			0

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U903 Lambay Island

The mean is based only on the most recent 5-season period, *i.e*. for the period 2010/11 - 2014/15. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 7: I-WeBS summary data for OU903 Lambay Island

[illegible]	1% National	1% International	2008/09	2009/10	[illegible]	[illegible]	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	[illegible]
Bar-tailed Godwit	170	1500		2									0
Black-headed Gull			200*	10				50		5*			25
Common Gull				20									0
Cormorant	110	1200		50				200		20*			100
Curlew	350	7600	6*	200	100			350		200*			175
Golden Plover	920	9300			100								0
Great Black-backed Gull								300		400*			150
Great Northern Diver	20	50		2									0
Grey Heron	25	5000						2		1*			1
Herring Gull								300		500*			150
Lapwing	850	72300		100	10								0
Light-bellied Brent Goose	350	400		400	350					400*			0
Mallard	280	53000						10					5
Mediterranean Gull			1*	1				1					0
Oystercatcher	610	8200	10*	100	100			100		250*			50
Purple Sandpiper	20	110						2		10*			1
Redshank	240	2400		25	15			30		10*			15
Red-throated Diver	20	3000						2		2*			1
Ringed Plover	120	540		2						2*			0
Sandwich Tern			4*										0

[illegible]	1% National	1% International	2008/09	2009/10	[illegible]	[illegible]	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	[illegible]
Shag								200		150*			100
Shelduck	100	2500	6*							4*			0
Turnstone	95	1400	5*	25	50			60		50*			30
Whimbrel				2	1			10		8*			5

I-WeBS Summary Data Downloaded from BirdWatch Ireland for 0U404 Dublin Bay

The mean is based only on the most recent 5-season period, *i.e*. for the period 2013/14 - 2017/18. Columns populated by 0 indicate seasons when no counts were carried out, while blank cells show that a species was absent. Counts that are poor quality are represented by an asterisk.

Appendix I - Table 8: I-WeBS summary data for OU404 Dublin Bay

[illegible]	[illegible] National	[illegible] International	2006/0 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Arctic Tern			2					3						0
Bar-tailed Godwit	150.00	1200.00	2231	2138	1260	1540	1745	1917	2141	1710	1658	2173	1934	2026
Black-headed Gull		20000.00	3766	4358	3738	2234	2356	2269	1907	2649	1259	2768	3802	2642
Black-necked Grebe								4						0
Black-tailed Godwit	190.00	610.00	664	936	698	1449	1375	927	1362	1768	873	2185	1479	1516
Common Gull		16400.00	549	298	685	579	573	410	309	985	272	890	321	536
Common Scoter	140.00	5500.00		2	30		80	20	10	42		40	65	33
Common Tern			173	15	23		14	38	3	39		1	2	9
Common/ Arctic Tern				400*				163						21
Coot	220.00	17500.00	1										199	136
Cormorant	120.00	1200.00	309	182	82	211	98	151	53	198	41	71	494	850
Curlew	350.00	8400.00	1374	1017	742	1240	688	1169	874	932	1424	567		0
Curlew Sandpiper		10000.00						1	1				7484	5730
Dunlin	570.00	13300.00	7453	6124	6443	4270	6490	3559	4163	5907	3603	3376		0
Feral/hybrid Mallard type								2	1					1
Gadwall	20.00	600.00			4	19				2	2			0
Glaucous Gull		2200.00			1								2501	1298
Golden Plover	1200.00	9300.00	1020	162	2500	1360	430	390	404	1080	742	1155		1
Goldeneye	60.00	11500.00	23	23	6	6	5	11	6		2	1*	2	0

[illegible]	[illegible] National	[illegible] International	2006/0 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Great Black-backed Gull		4200.00	637	180	141	84	124	358	116	190	52	263	115	154
Great Crested Grebe	40.00	3500.00	97	198	105	255	421	930	254	755	143	307	60	292
Great Northern Diver	20.00	50.00	3	2		8		2		3		5	2	2
Greenshank	20.00	2300.00	33	47	68	28	43	40	46	34	47	78	47	48
Green-winged Teal						1								0
Grey Heron	25.00	2700.00	44	33	31	54	30	28	15	68	40	44	29	42
Grey Plover	30.00	2500.00	751	202	265	394	293	200	307	310	452	240	248	299
Herring Gull		10200.00	497	262	314	422	341	519	135	490	261	538	607	471
Kingfisher			1			1	1			1		1		0
Knot	280.00	4500.00	4519	5802	5832	4105	2799	3435	3022	4547	4950	2495		0
Lapwing	1100.00	20000.00	56	26	64	191	44	120	67	52	54	143	6555	4879
Lesser Black-backed Gull		5500.00	475	14	4	19	195	28	25	5	20	16	32	61
Light-bellied Brent Goose	360.00	400.00	2017	3819	4445	5536	3292	4102	6134	3717	4862	4195	14	12
Little Egret	20.00	1300.00	29	69	100	87	73	48	19	59	69	59	3331	4105
Little Grebe	20.00	4000.00					5	1	9	1	5		87	69
Little Gull		1100.00					1	1					4	3
Little Tern			1											0
Long-tailed Duck		17250.00		1					2	1				1
Mallard	290.00	20000.00	91	67	58	97	138	151	52	97	106	120	111	101
Mediterranean Gull		770.00	16	33	70	27	8	113	23	39	27	64	6	41
Moorhen		20000.00	4	9	4	6	7	7	5	5		5	2	3
Mute Swan	90.00		5		3	7	6	2	2	5	6	9	12	8

[illegible]	[illegible] National	[illegible] International	2006/0 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oystercatcher	690.00	8200.00	3327	2933	3946	4324	2804	3408	3025	3074	3315	3588	3521	3508
Pintail	20.00	600.00	150	179	117	162	173	212	160	200	150	124	222	177
Purple Sandpiper	20.00	710.00		1	2		16	4	3	2	1	2		1
Red-breasted Merganser	20.00	1700.00	43	56	109	58	63	114	50	60	57	69	53	64
Red-necked Grebe										1				0
Redshank	300.00	3900.00	1758	2856	3621	2639	2790	2509	2077	2460	1889	1648	2274	1940
Red-throated Diver	20.00	3000.00	12	7	9	5	16	8	8	7	2	7	5	5
Ring-billed Gull		20000.00			1		1	2	1					0
Ringed Plover	100.00	730.00	849	355	146	267	205	314	217	139	121	109	285	172
Roseate Tern								3						0
Sanderling	60.00	1200.00	692	609	434	674	300	411	405	510	266	841	800	558
Sandwich Tern			342	122	38	2	43	6	23	52		8	9	14
Scaup	65.00	3100.00				2								0
Shag		2000.00	7	7	35	2	25	19	23	36	3	71	22	30
Shelduck	120.00	3000.00	761	1036	866	1142	821	603	731	961	2927	744	1611	1611
Shoveler	30.00	400.00	104	111	76	249	73	101	79	126	97	115	144	120
Slavonian Grebe		55.00					1							0
Snipe		20000.00	1		2	16	18	12	62	20		31	57	32
Spotted Redshank		900.00	1					1		1		3		1
Teal	340.00	5000.00	925	823	785	980	1358	909	981	1378	1233	1291	1092	1330
Tufted Duck	310.00	12000.00			1									0
Turnstone	95.00	1400.00	356	292	380	329	392	349	227	466	250	584	334	384
Unidentified Gull								10	85					0

[illegible]	[illegible] National	[illegible] International	2006/0 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Unidentified Tern			244											0
Water Rail			1	1				1						1
Whimbrel		6700.00			1		1		1	2	4		918	1351
Wigeon	630.00	15000.00	518	1302	663	1911	806	610	445	691	2201	1106		1
Yellow-legged Gull									1	1		2		1

Appendix II – Results of Survey Observations

Activity codes: HU – Hunting/Feeding; WA – Walking; FL – Flying; OG – On ground; GL – Gliding; PE – Perching; SO – Soaring; PR – Preening; WP – With prey; SW – Swimming; RO – Roosting

Appendix II - Table 1: Record of survey observations – consisting of both flight lines and point observations.

[illegible]	[illegible]	[illegible]	Birds	[illegible]	[illegible]
30/10/2020	BH	Black-headed Gull	3	PE	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	FF	Fieldfare	2	PE	Green
30/10/2020	P.	Grey Partridge	1	PE	Red
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	H.	Heron	1	SW	Green
30/10/2020	H.	Heron	1	SW	Green
30/10/2020	MH	Moorhen	2	OG	Green
30/10/2020	BH	Black-headed Gull	1	FL	Amber
30/10/2020	MH	Moorhen	1	FW	Green
30/10/2020	MA	Mallard	3	FW	Amber
30/10/2020	MS	Mute Swan	3	FW	Amber
30/10/2020	MA	Mallard	2	SW	Amber
30/10/2020	CM	Common Gull	1	FL	Amber
30/10/2020	BH	Black-headed Gull	15	FL	Amber
30/10/2020	H.	Heron	1	FL	Green
30/10/2020	BH	Black-headed Gull	2	FL	Amber
30/10/2020	LG	Little Grebe	2	FW	Green
30/10/2020	MH	Moorhen	1	SW	Green
30/10/2020	BH	Black-headed Gull	16	FL	Amber
30/10/2020	HS	House Sparrow	20	PE	Amber
30/10/2020	HG	Herring Gull	3	FL	Amber
30/10/2020	PF	Pied Flycatcher	1	PE	Amber
30/10/2020	BH	Black-headed Gull	3	FL	Amber
30/10/2020	GL	Grey Wagtail	1	OG	Red
30/10/2020	GR	Greenfinch	2	FL	Amber
30/10/2020	MP	Meadow Pipit	2	FL	Red

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	HG	Herring Gull	6	FL	Amber
30/10/2020	BZ	Buzzard	1	FL	Green
30/10/2020	HG	Herring Gull	2	FL	Amber
30/10/2020	LI	Linnet	6	FL/PE	Amber
30/10/2020	SG	Starling	6	FL	Amber
30/10/2020	LB	Lesser Black-backed Gull	1	FL	Amber
30/10/2020	SH	Sparrowhawk	1	FL	Green
30/10/2020	BH	Black-headed Gull	2	FL	Amber
30/10/2020	LI	Linnet	11	FL	Amber
30/10/2020	SG	Starling	4	FL	Amber
30/10/2020	LI	Linnet	3	FL	Amber
30/10/2020	MP	Meadow Pipit	4	OG/FL	Red
30/10/2020	GR	Greenfinch	3	PE	Amber
30/10/2020	GR	Greenfinch	2	PE	Amber
30/10/2020	SG	Starling	6	FL	Amber
30/10/2020	S.	Skylark	1	FL	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	BH	Black-headed Gull	4	FL	Amber
30/10/2020	LB	Lesser Black-backed Gull	3	FL	Amber
30/10/2020	MP	Meadow Pipit	2	FL	Red
30/10/2020	MP	Meadow Pipit	3	FL	Red
30/10/2020	RE	Redwing	16	PE	Red
30/10/2020	GR	Greenfinch	3	PE	Amber
30/10/2020	GC	Goldcrest	2	PE	Amber
30/10/2020	BH	Black-headed Gull	1	FL	Amber
30/10/2020	MH	Moorhen	1	OG	Green
30/10/2020	GL	Grey Wagtail	1	OG/WA	Red
30/10/2020	L.	Lapwing	50+	FL	Red
30/10/2020	SG	Starling	3	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	L.	Lapwing	30	FL	Red
30/10/2020	GC	Goldcrest	2	PE	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	BH	Black-headed Gull	3	FL	Amber
30/10/2020	BZ	Buzzard	2	PE/FL	Green
30/10/2020	MP	Meadow Pipit	3	OG	Red
30/10/2020	MP	Meadow Pipit	2	FL	Red
30/10/2020	SG	Starling	5	FL	Amber
30/10/2020	SG	Starling	5	FL	Amber
30/10/2020	MP	Meadow Pipit	2	FL	Red
30/10/2020	S.	Skylark	1	FL	Amber
30/10/2020	MP	Meadow Pipit	1	OG	Red
30/10/2020	SG	Starling	12	FL	Amber
30/10/2020	LI	Linnet	4	FL	Amber
30/10/2020	BH	Black-headed Gull	2	FL	Amber
30/10/2020	HS	House Sparrow	4	PE	Amber
30/10/2020	LB	Lesser Black-backed Gull	1	FL	Amber
30/10/2020	SG	Starling	7	PE	Amber
30/10/2020	BH	Black-headed Gull	1	FL	Amber
30/10/2020	HS	House Sparrow	2	PE	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	SG	Starling	16	PE	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	SG	Starling	1	PE	Amber
30/10/2020	SG	Starling	10	PE	Amber
30/10/2020	MP	Meadow Pipit	1	PE	Red
30/10/2020	SG	Starling	5	FL	Amber
30/10/2020	GC	Goldcrest	1	PE	Amber
30/10/2020	LI	Linnet	4	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
30/10/2020	LB	Lesser Black-backed Gull	1	FL	Amber
30/10/2020	BZ	Buzzard	1	PE	Green
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	BH	Black-headed Gull	2	FL	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	HG	Herring Gull	1	FL	Amber
30/10/2020	HS	House Sparrow	14	PE	Amber
29/10/2020	BH	Black-headed Gull	1	FL	Amber
29/10/2020	H.	Heron	1	FL	Green
29/10/2020	LG	Little Grebe	4	SW	Green
29/10/2020	H.	Heron	1	OG	Green
29/10/2020	BH	Black-headed Gull	1	FL	Amber
29/10/2020	HG	Herring Gull	2	FL	Amber
29/10/2020	H.	Heron	1	OG	Green
29/10/2020	BH	Black-headed Gull	6	FL	Amber
29/10/2020	MS	Mute Swan	4	SW	Amber
29/10/2020	H.	Heron	1	FL	Green
29/10/2020	MS	Mute Swan	1	SW	Amber
29/10/2020	LG	Little Grebe	4	SW	Green
29/10/2020	BH	Black-headed Gull	3	FL	Amber
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	BH	Black-headed Gull	4	FL	Amber
29/10/2020	LI	Linnet	1	PE/FL	Amber
29/10/2020	HG	Herring Gull	2	FL	Amber
29/10/2020	BH	Black-headed Gull	3	FL	Amber
29/10/2020	GL	Grey Wagtail	1	FL/OG	Red
29/10/2020	GL	Grey Wagtail	1	OG	Red
29/10/2020	BH	Black-headed Gull	6	FL	Amber
29/10/2020	GC	Goldcrest	1	PE	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
29/10/2020	LB	Lesser Black-backed Gull	1	FL	Amber
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	SN	Snipe	4	OG	Red
29/10/2020	HG	Herring Gull	2	FL	Amber
29/10/2020	HG	Herring Gull	3	FL	Amber
29/10/2020	BZ	Buzzard	1	FL	Green
29/10/2020	BH	Black-headed Gull	5	FL	Amber
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	SD	Stock Dove	6	PE	Red
29/10/2020	HG	Herring Gull	3	FL	Amber
29/10/2020	RE	Redwing	6	FL	Red
29/10/2020	HG	Herring Gull	3	FL	Amber
29/10/2020	SG	Starling	30	FL	Amber
29/10/2020	SG	Starling	40	FL	Amber
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	SG	Starling	10	FL	Amber
29/10/2020	SG	Starling	20	FL	Amber
29/10/2020	BZ	Buzzard	1	OG/PE	Green
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	SG	Starling	30	FL	Amber
29/10/2020	HG	Herring Gull	1	FL	Amber
29/10/2020	CM	Common Gull	1	FL	Amber
28/02/2021	SG	Starling	4	PE	Amber
28/02/2021	MH	Moorhen	1	SW	Green
28/02/2021	MA	Mallard	2	SW	Amber
28/02/2021	SG	Starling	4	PE	Amber
28/02/2021	MA	Mallard	2	SW	Amber
28/02/2021	MH	Moorhen	1	SW	Green
28/02/2021	BH	Black-headed Gull	4	FL	Amber
28/02/2021	CM	Common Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
28/02/2021	LG	Little Grebe	1	SW	Green
28/02/2021	MH	Moorhen	1	SW	Green
28/02/2021	MA	Mallard	1	FL	Amber
28/02/2021	CM	Common Gull	1	FL	Amber
28/02/2021	BH	Black-headed Gull	4	FL	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	MH	Moorhen	1	SW	Green
28/02/2021	HG	Herring Gull	1	FL	Amber
28/02/2021	MA	Mallard	9	FL	Amber
28/02/2021	SG	Starling	2	FL	Amber
28/02/2021	RE	Redwing	6	OG	Red
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	SG	Starling	1	FL	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	CA	Cormorant	1	FL	Amber
28/02/2021	GC	Goldcrest	2	FL/PE	Amber
28/02/2021	GC	Goldcrest	1	PE	Amber
28/02/2021	GC	Goldcrest	2	PE	Amber
28/02/2021	GC	Goldcrest	1	PE	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	MS	Mute Swan	2	FL	Amber
28/02/2021	MS	Mute Swan	3	FL	Amber
28/02/2021	HG	Herring Gull	2	FL	Amber
28/02/2021	HS	House Sparrow	4	FL	Amber
28/02/2021	SG	Starling	20	OG/FL	Amber
28/02/2021	GR	Greenfinch	1	PE	Amber
28/02/2021	HG	Herring Gull	1	FL	Amber
28/02/2021	GZ	Glaucous Gull	1	SW?	Green

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
28/02/2021	TU	Tufted Duck	8	SW	Amber
28/02/2021	MS	Mute Swan	4	OG/SW	Amber
28/02/2021	LB	Lesser Black-backed Gull	3	OG	Amber
28/02/2021	LG	Little Grebe	8	SW	Green
28/02/2021	MH	Moorhen	2	SW	Green
28/02/2021	GB	Great Black-backed Gull	1	SW	Green
28/02/2021	CO	Coot	11	SW	Amber
28/02/2021	CM	Common Gull	12	SW	Amber
28/02/2021	HG	Herring Gull	31	FL/SW	Amber
28/02/2021	MA	Mallard	16	SW	Amber
28/02/2021	BH	Black-headed Gull	120	FL/SW	Amber
27/03/2021	SG	Starling	6	FL	Amber
27/03/2021	H.	Heron	1	RO	Green
27/03/2021	CM	Common Gull	2	PE	Amber
27/03/2021	MA	Mallard	1	SW	Amber
27/03/2021	MA	Mallard	2	FL	Amber
27/03/2021	SG	Starling	1	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	HG	Herring Gull	1	FL	Amber
27/03/2021	H.	Heron	1	OG/FL	Green
27/03/2021	CM	Common Gull	1	FL	Amber
27/03/2021	BH	Black-headed Gull	2	FL	Amber
27/03/2021	MS	Mute Swan	2	SW	Amber
27/03/2021	MA	Mallard	5	SW	Amber
27/03/2021	HG	Herring Gull	3	OG	Amber
27/03/2021	BH	Black-headed Gull	1	FL	Amber
27/03/2021	HG	Herring Gull	2	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	2	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	2	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	MA	Mallard	1	SW	Amber
27/03/2021	SG	Starling	1	PE	Amber
27/03/2021	SG	Starling	2	FL	Amber
27/03/2021	MA	Mallard	2	SW	Amber
27/03/2021	HG	Herring Gull	2	FL	Amber
27/03/2021	MA	Mallard	4	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	BH	Black-headed Gull	1	FL	Amber
27/03/2021	HG	Herring Gull	6	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	3	FL	Amber
27/03/2021	BZ	Buzzard	1	FL	Green
27/03/2021	MA	Mallard	16	FL	Amber
27/03/2021	HG	Herring Gull	2	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	2	FL	Amber
27/03/2021	GS	Great Spotted Woodpecker	1	FL	Green
27/03/2021	GC	Goldcrest	1	PE	Amber
27/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/03/2021	MP	Meadow Pipit	2	OG/FL	Red
27/03/2021	HG	Herring Gull	3	FL	Amber
27/03/2021	MP	Meadow Pipit	1	FL	Red
27/03/2021	LG	Little Grebe	6		Green
27/03/2021	MH	Moorhen	3		Green
27/03/2021	LB	Lesser Black-backed Gull	2		Amber
27/03/2021	TU	Tufted Duck	2		Amber
27/03/2021	MS	Mute Swan	4		Amber
27/03/2021	MA	Mallard	13		Amber
27/03/2021	CO	Coot	6		Amber
27/03/2021	BH	Black-headed Gull	21		Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
27/03/2021	CM	Common Gull	8		Amber
27/03/2021	HG	Herring Gull	34+ 24		Amber
27/03/2021	HS	House Sparrow	3	PE	Amber
27/03/2021	HG	Herring Gull	2	FL	Amber
27/03/2021	GC	Goldcrest	1	PE	Amber
27/03/2021	HG	Herring Gull	3	FL	Amber
27/03/2021	LB	Lesser Black-backed Gull	2	FL	Amber
27/03/2021	CM	Common Gull	1		Amber
27/03/2021	HG	Herring Gull	4		Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	MA	Mallard	1	SW	Amber
27/02/2021	BH	Black-headed Gull	5	FL	Amber
27/02/2021	MA	Mallard	2	SW	Amber
27/02/2021	MA	Mallard	2	SW	Amber
27/02/2021	MS	Mute Swan	1	SW	Amber
27/02/2021	MH	Moorhen	1	SW	Green
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	SG	Starling	3	FL	Amber
27/02/2021	MH	Moorhen	1	SW	Green
27/02/2021	HG	Herring Gull	3	PE	Amber
27/02/2021	MA	Mallard	1	SW	Amber
27/02/2021	MA	Mallard	2	SW	Amber
27/02/2021	MH	Moorhen	1	SW	Green
27/02/2021	H.	Heron	1	OG	Green
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	GR	Greenfinch	1	PE	Amber
27/02/2021	HG	Herring Gull	2	FL	Amber
27/02/2021	MP	Meadow Pipit	2	PE/FL	Red
27/02/2021	GR	Greenfinch	1	PE	Amber
27/02/2021	HG	Herring Gull	4	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
27/02/2021	RE	Redwing	8	PE	Red
27/02/2021	BH	Black-headed Gull	2	FL	Amber
27/02/2021	GB	Great Black-backed Gull	1	FL	Green
27/02/2021	HS	House Sparrow	2	FL	Amber
27/02/2021	GB	Great Black-backed Gull	1	FL	Green
27/02/2021	LI	Linnet	2	FL/PE	Amber
27/02/2021	MP	Meadow Pipit	14	FL	Red
27/02/2021	LB	Lesser Black-backed Gull	2	FL	Amber
27/02/2021	LI	Linnet	1	PE	Amber
27/02/2021	S.	Skylark	1	FL/GL	Amber
27/02/2021	BZ	Buzzard	1	FL	Green
27/02/2021	SG	Starling	5	FL	Amber
27/02/2021	GR	Greenfinch	1	FL	Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	BZ	Buzzard	1	FL	Green
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	CM	Common Gull	1	FL	Amber
27/02/2021	HG	Herring Gull	2	FL	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	GR	Greenfinch	1	PE	Amber
27/02/2021	BZ	Buzzard	1	FL	Green
27/02/2021	SG	Starling	25	PE	Amber
27/02/2021	BH	Black-headed Gull	3	FL	Amber
27/02/2021	MP	Meadow Pipit	3	OG	Red
27/02/2021	P.	Grey Partridge	1	PE	Red
27/02/2021	BH	Black-headed Gull	2	FL	Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	GB	Great Black-backed Gull	1	FL	Green
27/02/2021	HG	Herring Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
27/02/2021	BZ	Buzzard	1	FL	Green
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	GR	Greenfinch	1	PE	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	CM	Common Gull	1	FL	Amber
27/02/2021	GR	Greenfinch	3	FL	Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	BH	Black-headed Gull	1	FL	Amber
27/02/2021	HG	Herring Gull	3	FL	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
27/02/2021	LB	Lesser Black-backed Gull	1	PE	Amber
27/02/2021	MP	Meadow Pipit	20	OG/FL	Red
27/02/2021	SG	Starling	6	FL	Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	MP	Meadow Pipit	1	FL	Red
27/02/2021	BH	Black-headed Gull	3	OG	Amber
27/02/2021	HS	House Sparrow	4	PE	Amber
27/02/2021	HG	Herring Gull	4	FL	Amber
27/02/2021	HG	Herring Gull	1	FL	Amber
27/02/2021	HS	House Sparrow	10	PE/FL	Amber
260302021	SG	Starling	2	FL	Amber
26/03/2021	MA	Mallard	2	FL	Amber
26/03/2021	MA	Mallard	3	FL	Amber
26/03/2021	H.	Heron	1	FL	Green
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	H.	Heron	1	FL	Green
26/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	SG	Starling	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
26/03/2021	GR	Greenfinch	1	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	MA	Mallard	2	SW	Amber
26/03/2021	CA	Cormorant	1	FL	Amber
26/03/2021	H.	Heron	1	PE/FL	Green
26/03/2021	HG	Herring Gull	7	FL	Amber
26/03/2021	HG	Herring Gull	6	FL	Amber
26/03/2021	MA	Mallard	1	SW	Amber
26/03/2021	MH	Moorhen	1	SW	Green
26/03/2021	MA	Mallard	2	SW	Amber
26/03/2021	CM	Common Gull	1	FL	Amber
26/03/2021	HG	Herring Gull	2	FL	Amber
26/03/2021	GC	Goldcrest	1	PE	Amber
26/03/2021	LI	Linnet	1	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	SG	Starling	2	FL	Amber
26/03/2021	GR	Greenfinch	2	FL	Amber
26/03/2021	SG	Starling	3	FL	Amber
26/03/2021	BZ	Buzzard	1	FL	Green
26/03/2021	SG	Starling	32	FL	Amber
26/03/2021	BZ	Buzzard	1	FL	Green
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	1	LB	Amber
26/03/2021	SG	Starling	36	FL	Amber
26/03/2021	MA	Mallard	1	FL	Amber
26/03/2021	HG	Herring Gull	3	FL	Amber
26/03/2021	GB	Great Black-backed Gull	1	FL	Green
26/03/2021	BZ	Buzzard	1	FL/PE	Green
26/03/2021	HG	Herring Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
26/03/2021	BZ	Buzzard	2	FL	Green
26/03/2021	SG	Starling	11	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	2	FL	Amber
26/03/2021	SG	Starling	2	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
26/03/2021	MP	Meadow Pipit	3	FL	Red
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	1	FL	Amber
26/03/2021	HG	Herring Gull	1	FL	Amber
26/03/2021	HG	Herring Gull	2	FL	Amber
26/03/2021	SG	Starling	6	FL	Amber
26/03/2021	LB	Lesser Black-backed Gull	3	FL	Amber
26/03/2021	MP	Meadow Pipit	4	FL	Red
26/03/2021	HG	Herring Gull	18	FL	Amber
26/03/2021	SG	Starling	3	FL	Amber
26/03/2021	HG	Herring Gull	22	FL	Amber
26/03/2021	HS	House Sparrow	14	PE/FL	Amber
26/03/2021	GR	Greenfinch	1	FL	Amber
26/03/2021	HG	Herring Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	5	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	CM	Common Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	3	FL	Amber
20/11/2020	BH	Black-headed Gull	3	FL	Amber
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	SG	Starling	3	FL	Amber
20/11/2020	BH	Black-headed Gull	3	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
20/11/2020	MS	Mute Swan	4	SW	Amber
20/11/2020	HG	Herring Gull	2	FL	Amber
20/11/2020	LG	Little Grebe	6	SW	Green
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	CA	Cormorant	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	CA	Cormorant	1	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	MH	Moorhen	1	SW	Green
20/11/2020	H.	Heron	1	FL	Green
20/11/2020	H.	Heron	1	OG	Green
20/11/2020	CM	Common Gull	1	FL	Amber
20/11/2020	CA	Cormorant	1	FL	Amber
20/11/2020	MH	Moorhen	1	SW	Green
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	MH	Moorhen	1	SW	Green
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	MA	Mallard	5	FL	Amber
20/11/2020	CA	Cormorant	1	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	H.	Heron	1	OG/FL	Green
20/11/2020	CO	Coot	1	OG	Amber
20/11/2020	WA	Water Rail	1	OG	Green
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	H.	Heron	2	OG/FL	Green
20/11/2020	HG	Herring Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
20/11/2020	MH	Moorhen	1	SW	Green
20/11/2020	LG	Little Grebe	6	SW	Green
20/11/2020	CM	Common Gull	3	FL	Amber
20/11/2020	CM	Common Gull	3	FL	Amber
20/11/2020	BH	Black-headed Gull	4	FL	Amber
20/11/2020	HG	Herring Gull	3	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	CM	Common Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	4	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	4	FL	Amber
20/11/2020	BH	Black-headed Gull	3	FL	Amber
20/11/2020	BH	Black-headed Gull	1	OG	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	HS	House Sparrow	4	PE	Amber
20/11/2020	SG	Starling	10	PE	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	RE	Redwing	1	PE	Red
20/11/2020	BZ	Buzzard	1	OG/FL	Green
20/11/2020	GC	Goldcrest	2	PE	Amber
20/11/2020	GC	Goldcrest	2	PE	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	GC	Goldcrest	1	PE	Amber
20/11/2020	GC	Goldcrest	2	PE	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
20/11/2020	GC	Goldcrest	1	PE	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	H.	Heron	1	FL	Green
20/11/2020	GB	Great Black-backed Gull	1	FL	Green
20/11/2020	MP	Meadow Pipit	6	FL	Red
20/11/2020	MH	Moorhen	1	OG	Green
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	2	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	HG	Herring Gull	1	FL	Amber
20/11/2020	BH	Black-headed Gull	1	FL	Amber
20/11/2020	MP	Meadow Pipit	5	OG/FL	Red
20/11/2020	BH	Black-headed Gull	2	FL	Amber
20/11/2020	SN	Snipe	1	OG/FL	Red
19/11/2020	MH	Moorhen	3	OG	Green
19/11/2020	GC	Goldcrest	1	FL	Amber
19/11/2020	SG	Starling	3	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	GC	Goldcrest	1	PE	Amber
19/11/2020	BH	Black-headed Gull	1	FL	Amber
19/11/2020	MS	Mute Swan	2	OG	Amber
19/11/2020	BH	Black-headed Gull	1	FL	Amber
19/11/2020	GC	Goldcrest	2	PE	Amber
19/11/2020	MH	Moorhen	1	SW	Green
19/11/2020	MH	Moorhen	1	SW	Green
19/11/2020	CA	Cormorant	1	FL	Amber
19/11/2020	MH	Moorhen	1	FL	Green

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
19/11/2020	MH	Moorhen	1	SW	Green
19/11/2020	LG	Little Grebe	5	SW	Green
19/11/2020	BH	Black-headed Gull	1	FL	Amber
19/11/2020	BH	Black-headed Gull	2	FL	Amber
19/11/2020	BZ	Buzzard	1	PE/FL	Green
19/11/2020	BZ	Buzzard	1	FL/OG	Green
19/11/2020	SG	Starling	10	FL	Amber
19/11/2020	BH	Black-headed Gull	2	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	GR	Greenfinch	1	PE	Amber
19/11/2020	BZ	Buzzard	1	FL	Green
19/11/2020	L.	Lapwing	60	FL	Red
19/11/2020	BZ	Buzzard	1	FL	Green
19/11/2020	CA	Cormorant	1	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	BZ	Buzzard	1	FL	Green
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	CM	Common Gull	1	FL	Amber
19/11/2020	HG	Herring Gull	2	FL	Amber
19/11/2020	L.	Lapwing	60	FL/OG	Red
19/11/2020	SG	Starling	3	FL	Amber
19/11/2020	CM	Common Gull	1	FL	Amber
19/11/2020	BZ	Buzzard	1	FL	Green
19/11/2020	SG	Starling	3	FL	Amber
19/11/2020	MU	Mediterranean Gull	1	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	SG	Starling	6	OG	Amber
19/11/2020	BH	Black-headed Gull	1	FL	Amber
19/11/2020	CM	Common Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
19/11/2020	MP	Meadow Pipit	2	FL	Red
19/11/2020	BZ	Buzzard	1	HU	Green
19/11/2020	BH	Black-headed Gull	1	FL	Amber
19/11/2020	MP	Meadow Pipit	6	FL	Red
19/11/2020	MP	Meadow Pipit	1	FL	Red
19/11/2020	SN	Snipe	4	OG/FL	Red
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	HG	Herring Gull	2	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	LI	Linnet	15	FL	Amber
19/11/2020	HG	Herring Gull	1	FL	Amber
19/11/2020	BH	Black-headed Gull	1	FL	Amber
02/02/2021	CA	Cormorant	1	FL	Amber
02/02/2021	MS	Mute Swan	1	SW	Amber
02/02/2021	MA	Mallard	2	SW	Amber
02/02/2021	GL	Grey Wagtail	1	FL	Red
02/02/2021	MS	Mute Swan	1	SW/HU	Amber
02/02/2021	CA	Cormorant	1	SW/HU	Amber
02/02/2021	HG	Herring Gull	1	FL	Amber
02/02/2021	BH	Black-headed Gull	14	FL	Amber
02/02/2021	MA	Mallard	2	OG	Amber
02/02/2021	CA	Cormorant	1	FL	Amber
02/02/2021	MA	Mallard	1	SW	Amber
02/02/2021	MA	Mallard	2	SW	Amber
02/02/2021	BH	Black-headed Gull	1	FL	Amber
02/02/2021	MA	Mallard	1	SW	Amber
02/02/2021	MA	Mallard	2	SW	Amber
02/02/2021	HG	Herring Gull	22	FL	Amber
02/02/2021	MS	Mute Swan	1	FL	Amber
02/02/2021	CM	Common Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
02/02/2021	HG	Herring Gull	1	PE	Amber
02/02/2021	BH	Black-headed Gull	1	FL	Amber
02/02/2021	BZ	Buzzard	1	FL/PE	Green
02/02/2021	BH	Black-headed Gull	13	FL	Amber
02/02/2021	GR	Greenfinch	3	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	LB	Lesser Black-backed Gull	1	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	SG	Starling	4	FL	Amber
02/02/2021	BH	Black-headed Gull	2	FL	Amber
02/02/2021	HG	Herring Gull	1	FL	Amber
02/02/2021	BH	Black-headed Gull	6	FL	Amber
02/02/2021	CM	Common Gull	1	FL	Amber
02/02/2021	BH	Black-headed Gull	2	FL	Amber
02/02/2021	L.	Lapwing	200+	FL	Red
02/02/2021	SG	Starling	3	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	BH	Black-headed Gull	4	FL	Amber
02/02/2021	L.	Lapwing	120+	FL	Red
02/02/2021	BH	Black-headed Gull	2	FL	Amber
02/02/2021	SG	Starling	6	FL	Amber
02/02/2021	GR	Greenfinch	2	PE	Amber
02/02/2021	GB	Great Black-backed Gull	1	FL	Green
02/02/2021	MA	Mallard	2	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	BH	Black-headed Gull	20	FL	Amber
02/02/2021	CM	Common Gull	4	FL	Amber
02/02/2021	BH	Black-headed Gull	16	FL	Amber
02/02/2021	BZ	Buzzard	2	PE	Green
02/02/2021	MP	Meadow Pipit	3	FL/OG	Red

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
02/02/2021	BH	Black-headed Gull	6	FL	Amber
02/02/2021	MP	Meadow Pipit	5	PE	Red
02/02/2021	BH	Black-headed Gull	1	FL	Amber
02/02/2021	SG	Starling	80	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	BH	Black-headed Gull	4	OG	Amber
02/02/2021	BH	Black-headed Gull	8	FL/OG	Amber
02/02/2021	BH	Black-headed Gull	10	FL	Amber
02/02/2021	SG	Starling	20	FL	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	BH	Black-headed Gull	4	FL	Amber
02/02/2021	BZ	Buzzard	1	PE/OG/FL	Green
02/02/2021	HG	Herring Gull	1	FL	Amber
02/02/2021	SG	Starling	16	FL	Amber
02/02/2021	BH	Black-headed Gull	6	OG	Amber
02/02/2021	L.	Lapwing	70	FL	Red
02/02/2021	HS	House Sparrow	10	PE	Amber
02/02/2021	HG	Herring Gull	2	FL	Amber
02/02/2021	BH	Black-headed Gull	8	OG	Amber
02/02/2021	BH	Black-headed Gull	3	FL	Amber
02/02/2021	LI	Linnet	6	PE/FL	Amber
02/02/2021	BH	Black-headed Gull	6	FL	Amber
02/02/2021	HS	House Sparrow	16	PE/FL	Amber
02/02/2021	HG	Herring Gull	1	FL	Amber
01/02/2021	SG	Starling	2	PE	Amber
01/02/2021	HS	House Sparrow	4	PE	Amber
01/02/2021	MS	Mute Swan	2	SW	Amber
01/02/2021	MA	Mallard	2	FL	Amber
01/02/2021	BH	Black-headed Gull	50	FL	Amber
01/02/2021	MH	Moorhen	1	SW	Green

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
01/02/2021	BH	Black-headed Gull	2	FL	Amber
01/02/2021	H.	Heron	1	OG	Green
01/02/2021	MA	Mallard	2	SW	Amber
01/02/2021	BH	Black-headed Gull	2	FL	Amber
01/02/2021	MS	Mute Swan	1	FL	Amber
01/02/2021	MA	Mallard	3	FL	Amber
01/02/2021	MH	Moorhen	1	SW	Green
01/02/2021	BH	Black-headed Gull	1	FL	Amber
01/02/2021	BH	Black-headed Gull	2	FL	Amber
01/02/2021	BH	Black-headed Gull	2	FL	Amber
01/02/2021	BH	Black-headed Gull	3	FL	Amber
01/02/2021	BH	Black-headed Gull	4	FL	Amber
01/02/2021	BH	Black-headed Gull	6	FL	Amber
01/02/2021	MH	Moorhen	1	SW	Green
01/02/2021	BH	Black-headed Gull	2	FL	Amber
01/02/2021	HG	Herring Gull	1	FL	Amber
01/02/2021	CM	Common Gull	1	FL	Amber
01/02/2021	HG	Herring Gull	1	FL	Amber
01/02/2021	L.	Lapwing	5	FL	Red
01/02/2021	HG	Herring Gull	1	FL	Amber
01/02/2021	GC	Goldcrest	1	PE	Amber
01/02/2021	SD	Stock Dove	1	FL	Red
01/02/2021	BH	Black-headed Gull	1	FL	Amber
01/02/2021	CM	Common Gull	1	FL	Amber
01/02/2021	GC	Goldcrest	1	PE	Amber
01/02/2021	GS	Great Spotted Woodpecker	1	PE	Green
01/02/2021	GC	Goldcrest	1	PE	Amber
01/02/2021	CM	Common Gull	1	FL	Amber
01/02/2021	L.	Lapwing	120+	OG/FL	Red
01/02/2021	HG	Herring Gull	1	FL	Amber

[illegible]	[illegible]	[illegible]	[illegible] Birds	[illegible]	[illegible]
01/02/2021	SG	Starling	15	FL	Amber
01/02/2021	HG	Herring Gull	1	FL	Amber
01/02/2021	BH	Black-headed Gull	142	SW/RO/PR	Amber
01/02/2021	TU	Tufted Duck	14	SW	Amber
01/02/2021	CO	Coot	22	SW	Amber
01/02/2021	LG	Little Grebe	6	SW	Green
01/02/2021	MS	Mute Swan	4	SW	Amber
01/02/2021	MH	Moorhen	8	SW	Green
01/02/2021	MA	Mallard	57	SW	Amber
01/02/2021	HG	Herring Gull	29	SW/RO/PR	Amber
01/02/2021	CM	Common Gull	22	SW/RO/PR	Amber