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MULTIDISCIPLINARY CONSULTING ENGINEERS

D805: HILLCREST ROAD IMPROVEMENT SCHEME

BIRD SURVEY REPORT

For

Dún Laoghaire-Rathdown County Council

6 June 2024

NOTICE

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1 INTRODUCTION

1.1 PROJECT CONTRACTUAL BASIS & PARTIES INVOLVED

This Bird Survey Report has been prepared by O'Connor Sutton Cronin & Associates Ltd. (OCSC) at the request of their Client, Dún Laoghaire-Rathdown County Council. The proposal is for a road improvement scheme at Hillcrest, Sandyford, Dublin 18. The site location is shown in Figure 1.1. The regulatory authority for the site is Dún Laoghaire-Rathdown County Council.

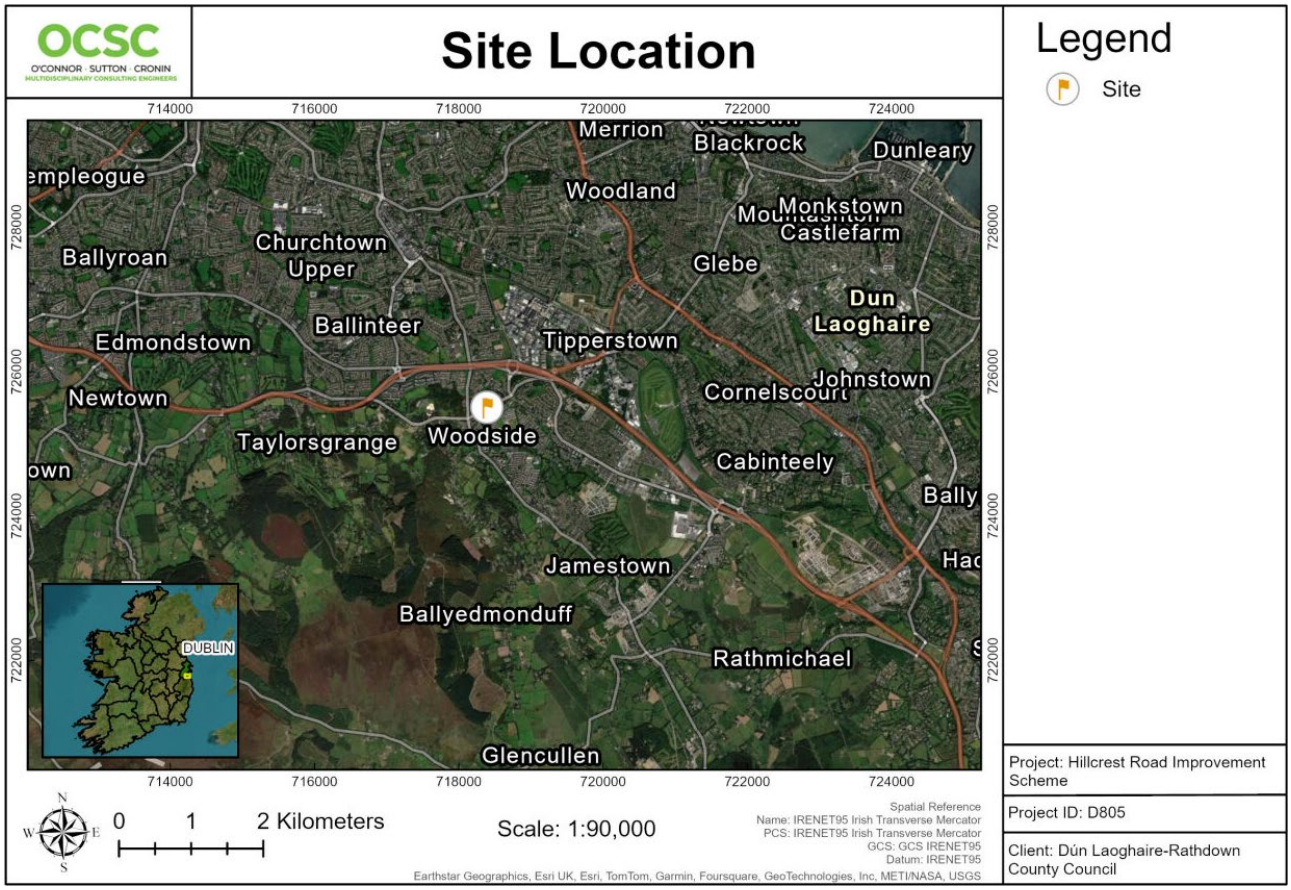

Figure 1.1: Site Location (OCSC, 2024)

1.2 QUALIFICATIONS AND EXPERIENCE

The surveyor and author, Eadaoin Butler has a bachelor's degree in Ecology with over 2 years of experience in environmental consultancy. Eadaoin has experience in conducting ecological assessments for a range of projects including AA Screening reports, Natura Impact Statements, Ecological Impact Assessment as well as an array of ornithological assessments and species-specific assessments reports and is, therefore, suitably qualified and experienced to undertake this assessment.

1.3 LIMITATIONS

This report has been prepared for the sole use of Dún Laoghaire-Rathdown County Council ("the Client"). No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by OCSC.

This assessment is based on a review of available historical information, environmental records, a site visit, consultations, relevant guidance information, and reports from third parties. All information received has been taken in good faith as being true and representative.

This report has been prepared in line with best industry standards. The methodology adopted and the sources of information used by OCSC in providing its services are outlined in this Report. The assessment conducted by OCSC and described was undertaken in May 2024 and is based on the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

OCSC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to OCSC's attention after the date of the Report. The conclusions presented in this report represent OCSC's best professional judgement based on a review of the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

2 DESCRIPTION OF THE EXISTING ENVIRONMENT

2.1 GENERAL SITE DESCRIPTION

The proposed development site is approximately centred at the Irish Transverse Mercator (ITM) coordinates 318486 E 225503 N and is bounded by Enniskerry Road to the west and Kilgobbin Road to the east. The site consists of Hillcrest Road and land along its length which is currently in use as roadway, footpaths, and gardens associated with houses adjoining the site, primarily to the south. It is proposed to provide improvement along Hillcrest Road between Lamb's Cross and the Kilgobbin Road Junction (approximately 660m of road). The scheme ties into existing junction improvements at both ends. The improvement includes the provision of footpaths and cycle tracks on both sides of the widened carriageway. This requires land acquisition to the south of the current road, as the current roadway is extremely narrow. The work also include upgrades to public lighting, surface water drainage, road marking and signage and associated works. The site location is shown in Figure 1.1. The regulatory authority for the site is Dún Laoghaire-Rathdown County Council.

The site and its surroundings are set in a primarily residential area with some nearby commercial/retail, public amenity, and educational land uses as well as undeveloped lands and forestry. To the north and east of the study area are residential neighbourhoods, open space used for public amenities, and road infrastructure associated with the M50 motorway. To the south are residential neighbourhoods and undeveloped lands. To the west and southwest of the site are Sandyford Community Centre, St. Mary's National School, several shops, residences, and a pitch-and-put course. To the northwest are primarily undeveloped open space and forestry with the National Sport and Science Centre further to the northwest. There are a large number of trees, hedges, and small wooded areas with good roosting and nesting potential within and near the site. The study area is shown in Figure 2.1.

2.2 HYDROLOGY

There is one surface water feature mapped within the site area, the Carrickmines Stream (IE_EA_10C040350). This stream runs through a culvert on the western side of the site, flowing eventually to the Irish Sea near Killiney. This stream is suitable to support wildfowl and other aquatic birds. The next nearest surface water feature is the Barnacullia Stream (IE_EA_10C040350) which joins the Carrickmines Stream 4.7km downstream of the site.

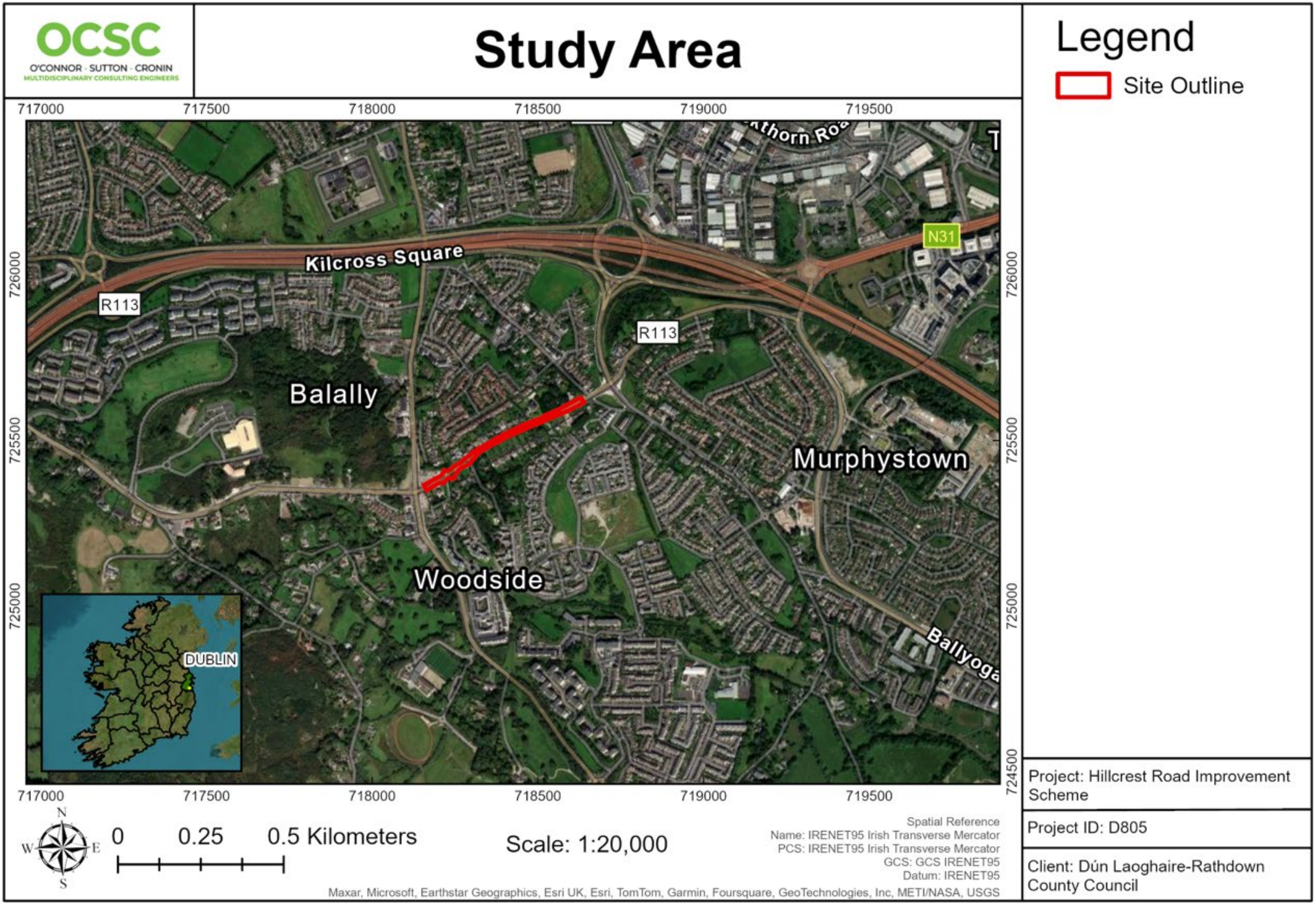

Figure 2.1: Study Area

3 LEGISLATION

All Irish bird species are protected at national level under the Wildlife Act (1976) and Wildlife Amendment Acts (2000 and 2010). At a European level, species are protected under the Birds Directive (Council Directive 79/409/EEC) which is transposed into national law by various measures including the European Communities (Natural Habitats) Regulations, 1997-2005, and the European Communities (Conservation of Wild Birds) Regulations, 1985. The Birds Directive (Directive 79/409/EEC) is the oldest piece of EU legislation on the environment and one of its cornerstones of Natura 2000.

Habitat loss and degradation are the most serious threats to the conservation of wild birds. Therefore, the directive places great emphasis on the protection of habitats for endangered and migratory bird species. This is achieved through the establishment of a network of Special Protection Areas (SPAs). There are 500 wild bird species naturally occurring in the EU and they are protected through various ways. Of those 500 species, 193 species and sub-species are particularly threatened, and member states must designate SPAs for their survival and for all migratory bird species that occur within the member state.

The identification and delimitation of SPAs must be entirely based on scientific criteria as follows;

- Area used regularly by >1% of Irish population of Annex 1 species
- Area used regularly by >1% of a regularly occurring migratory species
- Area used regularly by >20,000 waterfowl/seabirds

Annex I of the Birds Directive protect species that are in danger of extinction, vulnerable to specific changes within their habitat, and considered rare due to small population size or restricted distribution. Some species may also be included due to the specific nature of their habitat. Annex II of the Birds Directive covers 82 species that can be hunted during specific hunting periods throughout the year. The hunting periods are limited and exclude times of migration, reproduction, and raising young.

Annex III of the Birds Directive protects birds though prohibiting activities that would directly threaten birds. This includes deliberate killing, capture, trade, and destroying nests of birds. Annex IV of the Birds Directive protects birds through the sustainable management of hunting which outlaws large scale and non-selective methods of hunting. Member states must outlaw all methods of hunting listed in Annex IV. Annex V of the Birds Directive promotes research in an effort to reinforce protection, management, and use of all species covered in the directive. In many cases a derogation licence will be required to remove or disturb any protected species or their habitats.

3.1 RELEVANT GUIDANCE DOCUMENTS

This report draws on guidelines already available in Europe and uses the following documents:

- Bibby, C.J., Burgess, N.D., Hill, D.A., and Mustoe, S.H. (2000). Bird Census Techniques, 2nd ed. Academic Press, London.

- BirdWatch Ireland. 2012. Countryside Bird Survey: Counter Manual. **https://birdwatchireland.ie/app/uploads/2019/03/CBS_Manual_June2012_web_resolution.pdf**
- BirdWatch Ireland and the National Parks and Wildlife Service of the Department of the Environment, Heritage and Local Government. Counter Manual. Guidelines for Irish Wetland Bird Survey Counters.
- British Trust for Ornithology. 2019. WeBS Counter Handbook. Part 2. WeBS Core Counts. Methodology and Counting Techniques. **https://www.bto.org/sites/default/files/02_-_core_count_0.pdf**
- CIEEM (2019). Guidelines for Ecological Impact Assessment in the UK and Ireland. Chartered Institute for Ecology and Environmental Management, Winchester, UK.
- Colhoun, K., and Cummins, S. (2013). Birds of Conservation Concern in Ireland 2014–2019. Irish Birds 9:523—544
- Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. Royal Society for the Protection of Birds, The Lodge, Sandy, Beds.
- Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. (2013). Raptors: a Field Guide to Survey and Monitoring (3rd Edition). The Stationery Office, Edinburgh.

4 DESIGNATED SITES

There are five SPA sites designated for the protection of birds within 15km of the proposed development. These sites were assessed in terms of the species they are delineated to protect. The site was then assessed to determine if it has the potential to support these species in any manner, whether it be nesting, roosting, hunting, etc. The proposed project site was also analysed to determine if any hydrological or terrestrial connections exist with any SPAs within 15km of the site. No such connections were identified. Based on this assessment, a zone of influence for the proposed works of 5km was chosen. This is a conservative figure, and the zone of influence is likely to be lower than 5km.

There are two SPAs located within 5km of the site. The proposed site is located 4.9km from the South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) and 4.95km from the Wicklow Mountains SPA (Site Code 004040). Figure 4.1 and Table 4.1 below present locations and details, respectively, of the key ecological features of designated sites located within 5km of the site.

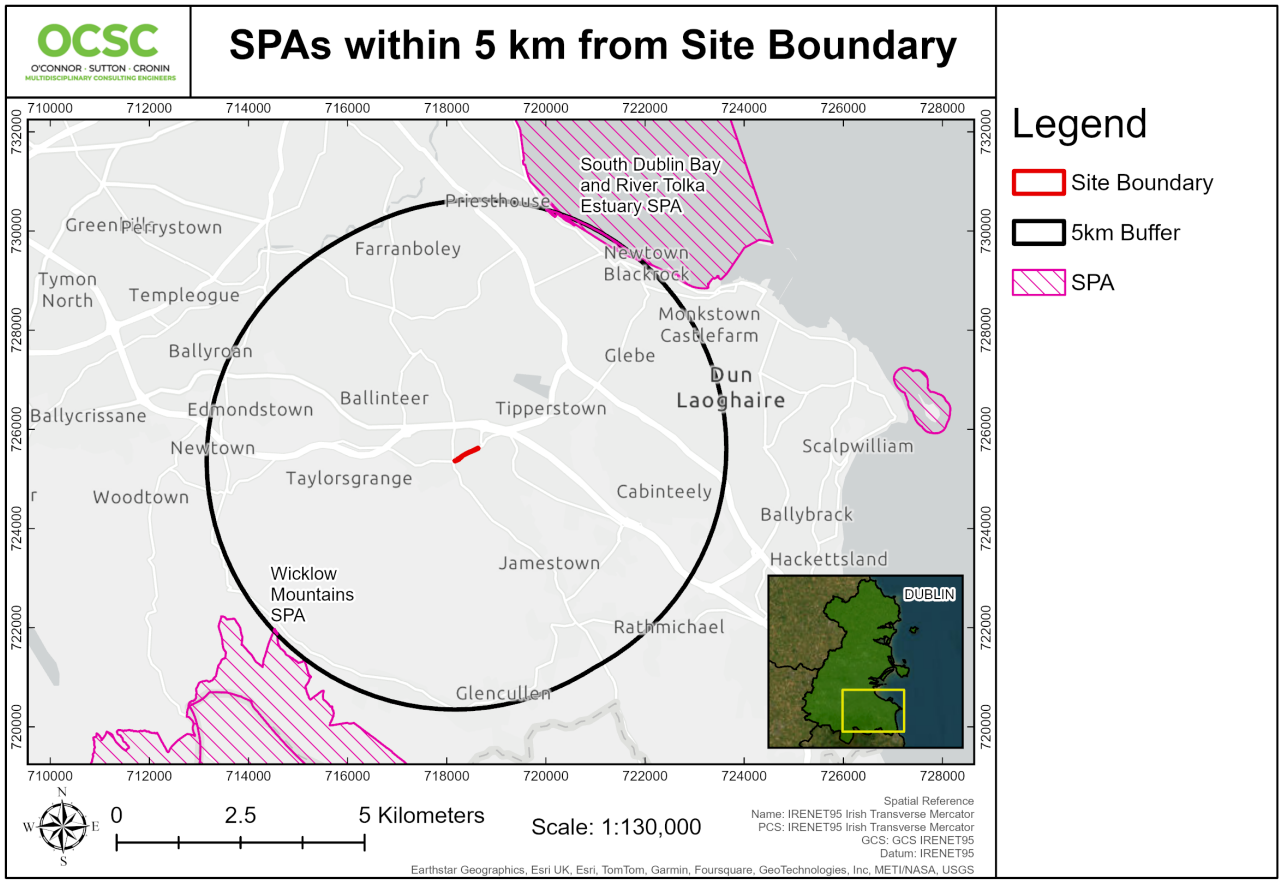

Figure 4.1: SPAs located within 5km of the site.

Table 4.1: European Sites within 5 kilometres (ZOI) of the site

Site Code	Site Name	Distance (km)	Reasons for Designation
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)			
004040	Wicklow Mountains SPA	4.9 SW	[A098] Merlin (*Falco columbarius*) [A103] Peregrine (*Falco peregrinus*)
004024	South Dublin Bay and River Tolka Estuary SPA	4.9 NE	[A046] Light-bellied Brent Goose (*Branta bernicla hrota*) [A130] Oystercatcher (*Haematopus ostralegus)* [A137] Ringed Plover (*Charadrius hiaticula)* [A141] Grey Plover (*Pluvialis squatarola)* [A143] Knot (*Calidris canutus)* [A144] Sanderling (*Calidris alba)* [A149] Dunlin (*Calidris alpina)* [A157] Bar-tailed Godwit (*Limosa lapponica)* [A162] Redshank (*Tringa totanus)* [A179] Black-headed Gull *(Chroicocephalus ridibundus)* [A192] Roseate Tern (*Sterna dougallii)* [A193] Common Tern (*Sterna hirundo)* [A194] Arctic Tern (*Sterna paradisaea)* [A999] Wetlands

5 SURVEY

5.1 SURVEY METHODOLOGY

Surveys were carried out in May 2024, which is within the breeding season for birds. This season typically falls between late spring and early summer, from April to July. During this time birds are more vocal with males singing to attract mates, territorial behaviours peak, and nesting activities are more obvious. Within this seasonal period, bird surveys are most effective early in the morning, from sunrise until about 10am as birds are most active and vocal.

Surveying took place on the 15th of May 2024. Weather conditions were dry with temperatures ranging from 12-16°C. A transect method was chosen to cover more ground within the site compared to a stationary count method. Transects were carried out at both dawn and dusk. Dawn surveys took place from 4.30am-8am and dusk surveys from 8pm-11pm. Surveyors walked at a steady pace along Hillcrest Road recording all sightings and songs/calls. Any indications of nesting such as adults carrying food were recorded. The methodology used was adapted from the Countryside Bird Survey (CBS) methodology.

5.2 SURVEY RESULTS

Species recorded over the dawn and dusk surveys are listed below in Table 5.1. Of all the species recorded on site, Eurasian Wren, Common Chiffchaff, Common Wood Pigeon, Eurasian Blackbird, and European Robin, were the most commonly encountered. Hillcrest Road has a good coverage of foliage with most gardens containing hedgerows or treelines along the residential boundary. As a result of this, pinpointing the exact location of calls and songs was difficult. A general area that the call originated from and distance from the site could be estimated; however, at times it was difficult to establish if the calls were originating from within the site boundary. Frequent traffic and noise from vehicles disrupted surveying efforts making identification difficult at times.

Two main areas with higher levels of bird activity were identified compared to the road as a whole (see Figure 5.1). Both areas areas have a higher density of trees compared to the single treeline seen throughout the rest of the site. The first area identified to have higher bird activity is located toward the eastern end of Hillcrest Road. The view of this area was limited by a wall; however, the plant species recorded were as follows: Oak (*Quercus patraea),* Cherry Laurel (*Prunus laurocerasus*), Butterfly Bush (*Buddleja*), and Lawson's Cypress (*Chamaecyparis lawsoniana*). Birds recorded within this area are listed in Table 5.1. Evidence of nesting Wren (*Troglodytes troglodytes*) was recorded. Adult(s) were observed flying in and out of the area with high frequency with two occasions of the bird carrying food. Although this eastern area was identified as having high levels of activity along with highly suitable habitat for nesting, it is outside of the site boundary and removal of vegetation and trees are not expected, therefore, works to Hillcrest Road are not anticipated to have a

significant impact on this area. Impacts are limited to temporary noise disturbance and light pollution which will have an imperceptible effect on breeding birds within this area.

The second area identified to have higher levels of bird activity is located toward the western end of Hillcrest Road, south of the roadway (Figure 5.1). The vegetation recorded within this area were as follows: Sycamore Maple (*Acer pseudoplatanus*), Scot's Pine (*Pinus sylvestris*), Box (*Buxus sempervirens*), Beech (*Fagus sylvatica*), Ash (*Fraxinus excelsior*), Butterfly Bush (*Buddleja*), and Lawson's Cypress (*Chamaecyparis lawsoniana*). Birds recorded within this area are listed in Table 5.2. High levels of song and frequent flying into and out of the area were observed; however, no indications of nesting or breeding activity was identified. This area falls within the site boundary, with tree and vegetation removal expected to be required as part of the works to Hillcrest Road. Based on this, it is anticipated that the works will cause a moderate impact to local bird populations within this area. This will result in the removal of potential roosting and breeding locations of 14 species (Table 5.2). Birds were observed throughout the remainder of the site, however no indication of nesting or unusually high levels of activity were recorded.

A complete list of birds recorded within the site area are included in Table 5.3.

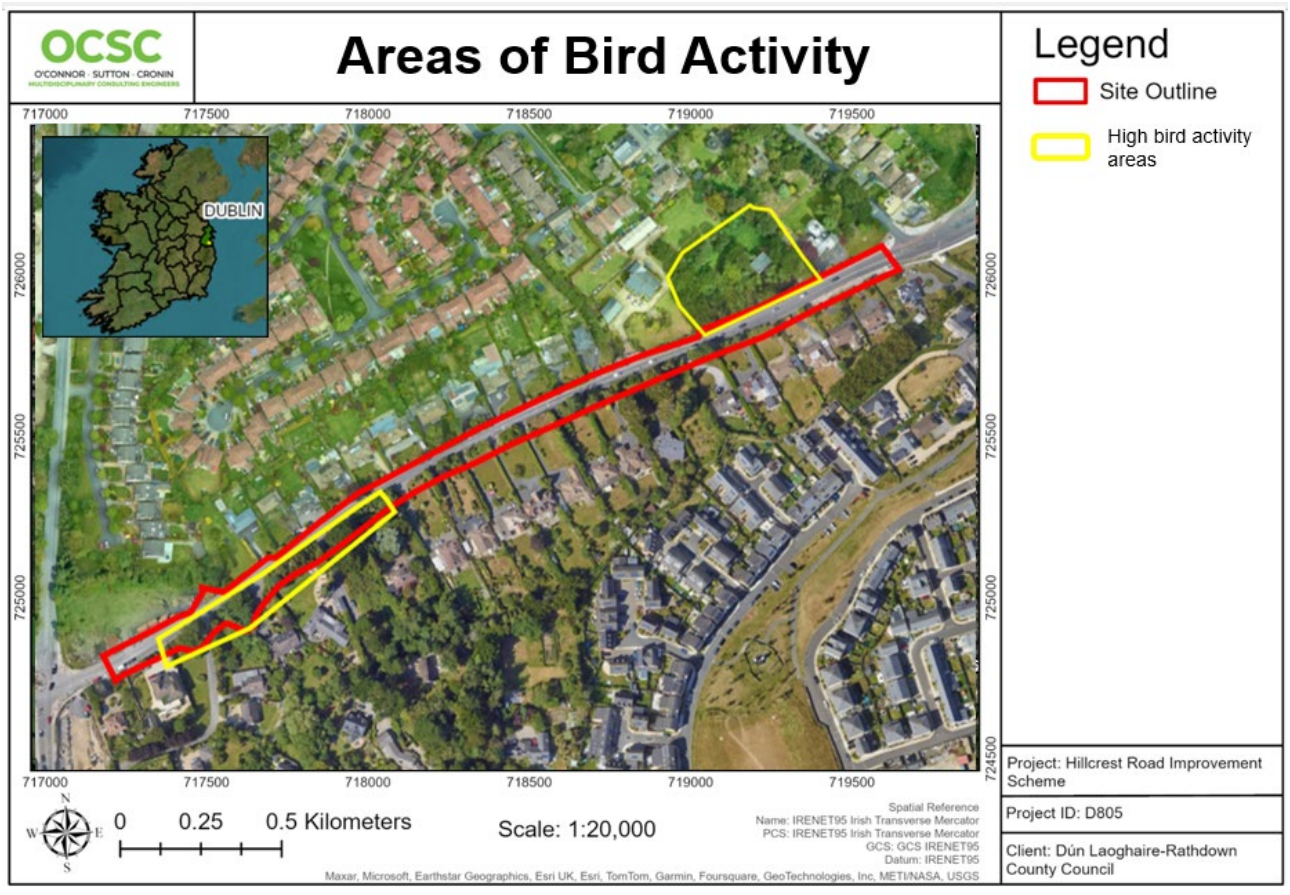

Figure 5.1: Areas identified with high levels of bird activity.

Table 5.1: Birds recorded within the eastern area of high activity.

Common Name	Latin Name
Common Chiffchaff	*Phylloscopus collybita*
Common Wood Pidgeon	*Columba palumbus*
Dunnock	*Prunella modularis*
Eurasian Blackbird	*Turdus merula*
Eurasian Blue Tit	*Cyanistes caeruleust*
Eurasian Bullfinch	*Pyrrhula pyrrhula*
Eurasian Collared Dove	*Streptopelia decaocto*
Eurasian Jackdaw	*Corvus monedula*
Eurasian Magpie	*Pica pica*
Eurasian Wren	*Troglodytes troglodytes*
European Robin	*Erithacus rubecula*
Great Tit	*Parus major*

Table 5.2: Birds recorded within the western area of high activity.

Common Name	Latin Name
Coal Tit	*Periparus ater*
Common Chaffinch	*Fringilla coelebs*
Common Chiffchaff	*Phylloscopus collybita*
Common Wood Pidgeon	*Columba palumbus*
Eurasian Blackbird	*Turdus merula*
Eurasian Blackcap	*Sylvia atricapilla*
Eurasian Blue Tit	*Cyanistes caeruleust*
Eurasian Bullfinch	*Pyrrhula pyrrhula*
Eurasian Collared Dove	*Streptopelia decaocto*
Eurasian Magpie	*Pica pica*
Eurasian Wren	*Troglodytes troglodytes*
European Robin	*Erithacus rubecula*
Goldcrest	*Regulus regulus*
Great Tit	*Parus major*

Table 5.3: Complete species list along Hillcrest Road.

Common Name	Latin Name
Coal Tit	*Periparus ater*
Common Chaffinch	*Fringilla coelebs*
Common Chiffchaff	*Phylloscopus collybita*
Common Wood Pidgeon	*Columba palumbus*
Dunnock	*Prunella modularis*
Eurasian Blackbird	*Turdus merula*
Eurasian Blackcap	*Sylvia atricapilla*
Eurasian Blue Tit	*Cyanistes caeruleust*
Eurasian Bullfinch	*Pyrrhula pyrrhula*
Eurasian Collared Dove	*Streptopelia decaocto*
Eurasian Jackdaw	*Corvus monedula*
Eurasian Magpie	*Pica pica*
Eurasian Wren	*Troglodytes troglodytes*
European Robin	*Erithacus rubecula*
European Starling	*Sturnus vulgaris*
Goldcrest	*Regulus regulus*
Great Tit	*Parus major*
Hooded Crow	*Corvus cornix*
Mistle Thrush	*Turdus viscivorus*
Song Thrush	*Turdus philomelos*

6 MITIGATION

The following mitigation measures in relation to birds are proposed to comply with legislation protecting birds and their nests:

- The time frame for the planned removal is within the breeding bird season and it must be stressed that it is an offence to damage bird eggs and nests that are in use during this period. If any nests are identified during the tree removal, works to that tree must cease. Works can continue once the nest is empty or until after the nesting season (1st March to 31st August inclusive).
- Tree felling should be carried out using a soft felling technique which ensures minimal impact on roosting birds. A tree identified for removal should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow birds to become active. It is then recommended that the trees are removed in sections, lowering branches to the ground. This will give more opportunity to identify any bird nests that may be present.
- In order to minimise the risk of accidental damage to treelines and individual trees, all trees marked for retention as identified in the proposal should be fenced off at the outset of works and for the duration of construction to avoid damage to nearby nesting birds.
- Where fencing is not feasible due to insufficient space, the tree/treeline should be wrapped with hessian sacking (or suitable equivalent) around the trunk of the tree to ensure no accidental damage will occur.
- Additional nesting opportunities should be installed to compensate for the removal of substantial amounts of vegetation and trees from the proposed development site. 10 no. bird boxes, of different shapes, should be erected on retained trees, in suitable locations, to compensate for the removal of nesting habitat as part of the proposed development.

7 SUMMARY & CONCLUSION

This report has been prepared for the proposed road improvement scheme at Hillcrest, Sandyford, Dublin 18. A total of 20 species were recorded during the combined dusk and dawn surveys, either visually or through call/song. Hillcrest Road has a good coverage of foliage with most gardens containing hedgerows or treelines along the residential boundary. Hedgerows and treelines located south of the roadway are marked for removal to allow for the proposed works.

Two areas were identified as having higher levels of bird activity compared to the road as a whole. However, only the area to the west, shown on Figure 5.1 falls within the site boundary and is marked for the removal of trees, hedgerow and vegetation. This area is likely to suffer temporary negative effects due to the proposed works and will result in the loss of breeding sites for birds. Within this area, no confirmation or evidence of nesting was identified during the survey period, however, based on the high activity levels within this wood along with it's size, nesting is probable.

The works to Hillcrest Road will cause a slight, temporary impact to local bird populations. The works will see the removal of treelines and hedgerows along the southern boundary with the loss of potential roosting and nesting sites. However, with the implementation of mitigation measures outlined above, any impacts to breeding birds, along with their nests will not be significant. Upon the installation of bird boxes in the remaining trees, the loss in breeding opportunities will be minimised and a significant change in breeding along Hillcrest road is not anticipated.

8 REFERENCES & BIBLIOGRAPHY

- **Bibby, C., Burgess, N.D., Hill, D., & Mustoe, S. (2000)** Bird Census Techniques – Second Edition. Academic Press, London, England.
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- **Nobel DG, Bashford RI and Baille SR (2000).** Breeding Bird Survey 1999. British Trust for Ornithology, Thetford.
- **Symes N and Currie F (2005)** Woodland Management for Birds: A Guide to Managing for Declining Woodland Birds in England. RSPB Management Guides.

9 VERIFICATION

This report was compiled by Eadaoin Butler, BSc, Consultant Ecologist; reviewed by Luis Iemma, BSc, MSc, PhD, CEcol, MCIEEM, Associate Ecologist, and Glenda Barry, BSc, MSc, PGeo, EurGeol, Associate Consultant; and approved by Eleanor Burke, BSc, MSc, DAS, MIEnvSc, CSci, and OCSC Director (Environmental).

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