Habitats Directive Assessment

Screening of Public Realm Development, Lucan Demesne, Lucan, Co. Dublin

for Appropriate Assessment in accordance with the requirements of Article 6(3) of the EU Habitats Directive

Final Report

26th June 2024

Faith Wilson
ECOLOGICAL CONSULTANT

Faith Wilson Ecological Consultant BSc CEnv MCIEEM
Kestrel Ridge, Tigroney West, Avoca, Co. Wicklow

Habitats Directive Assessment

Screening of Public Realm Development, Lucan Demesne, Lucan, Co. Dublin

for Appropriate Assessment in accordance with the requirements of Article 6(3) of the EU Habitats Directive

TABLE OF CONTENTS

Habitats Directive Assessment

Screening of Public Realm Development, Lucan Demesne, Lucan, Co. Dublin

for Appropriate Assessment in accordance with the requirements of Article 6(3) of the EU Habitats Directive

SECTION 1

1.1. INTRODUCTION

This document represents the Report for Screening for Appropriate Assessment (AA) for a proposed public realm development on lands at Lucan Demesne, Lucan, Co. Dublin, as shown on **Figure 1** below. Faith Wilson Ecological Consultant was engaged by Cunnane Stratton Reynolds Landscape Architects as part of a Part VIII Application for the development by South Dublin County Council.

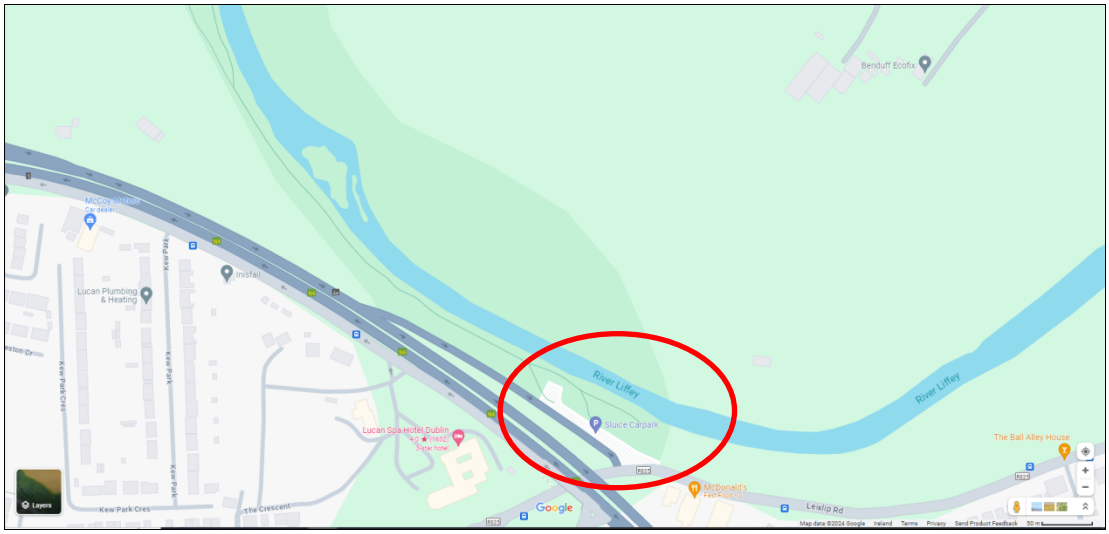

Figure 1. Location of the proposed public realm development at Lucan Demesne, Lucan, Co. Dublin.

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the conservation of wild habitats and of wild fauna and flora) is to create a network of protected wildlife sites across Europe, which are to be maintained at a favourable conservation status[1]. Each member state must designate their most important natural areas as Special Areas of Conservation (SAC). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly

[1] The conservation status of a **habitat** can be taken as "favourable" when its natural range and area it covers within that range is stable or increasing and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.

The conservation status of a species can be taken as "favourable" when population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats, the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future and there is and will continue to be a sufficiently large habitat to maintain its populations on a long-term basis. Article 1 (i) of the Habitats Directive 92/43/EEC.

curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as NATURA 2000 and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for birds, which are designated under the European Birds Directive (Council Directive 79/409/EEC as amended by Directive 2009/147/EC).

It is a requirement of the Habitats Directive ((92/43/EEC) that the competent consent authority, which is either the planning authority (or on appeal, An Bord Pleanála), must ensure that a proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only to the extent that the authority is satisfied it will not adversely affect the integrity of the area and that an appropriate assessment of the implications of the development for the conservation status of the site is undertaken.

The European Parliament, in a communication to the European Council in September 2000, states: The implementation of the European Habitats Directive and Birds Directive, both with respect to species conservation and with respect to the establishment of the Natura 2000 network, is one of the most important tools for achieving the objectives of the Convention on Biological Diversity in the European Union and member states (European Parliament 2000).

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which has the potential to have implications for the site in view of the site's conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

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 or 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 implications for the site and subject to the provisions of paragraph 4, the competent 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.

Article 6(4) states:
If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

The European Communities (Birds and Natural Habitats) Regulations 2011 were implemented to transpose the Habitats Directive and the Birds Directive into Irish law as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements. This report has taken into consideration the relevant requirements of the Planning and Development Act, 2000 (as amended by

the Planning and Development Act 2010). References to Natura 2000 sites throughout this report are to be taken as referring to European sites as defined in the above Planning Act.

This report has been completed by Faith Wilson BSc CEnv MCIEEM. Faith is a highly experienced and qualified ecologist, with over twenty five years of experience in ecological and environmental surveys and consultancy, across a wide range of sectors. Faith is a Chartered Environmentalist (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

1.2. METHODOLOGY

This report has been undertaken in accordance with the European Commission methodological guidance on the provisions of article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC 2001), the European Commission Guidance 'Managing Natura 2000 sites) and the Department of Environment, Heritage and Local Government guidance document (2010) [2]. This report has followed the stage by stage approach detailed in the above guidelines as outlined below:

Stage 1. Screening — the process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant;

Stage 2. Appropriate Assessment — the consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3. Assessment of Alternative Solutions — the process, which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

---

[2] Assessment of plans and projects significantly affecting Natura 200 sites- methodological guidance on the provisions of Article 6(3) and 6 (4) of the Habitats Directive 92/43/EEC. European Commission (2001).

Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Over-riding Public Interest, Compensatory Measures, Overall Coherence. Opinion of the European Commission. European Commission (January 2007).

Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission (2019).

Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of Environment, Heritage and Local Government. (2010).

OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management. March 2021. Office of the Planning Regulator (2021).

Stage 4. Assessment where no alternative solutions exist and where adverse impacts remain — an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

This report was based on a desk-top study drawing on information sources which included the following: NPWS on-line data for Natura 2000 sites; Ordnance Survey of Ireland mapping and aerial photography; and geological, hydrological and soils data available from GSI.

Field surveys of the lands were completed on the 30th August and the 3rd and 19th October 2023. Further details are presented in the Ecological Impact Assessment Report, which accompanies the planning application.

This report consists of one stage in Appropriate Assessment; the Screening for Appropriate Assessment (Stage 1). Neither **Stage 2 Appropriate Assessment**, **Stage 3 Assessment of Alternative Solutions** nor **Stage 4 Assessment, where no alternative solutions exist and where adverse impacts remain** were applicable in this instance, as the proposed development of the lands at Lucan Demesne will not adversely affect the integrity of any Natura 2000 site.

SECTION 2 SCREENING MATRIX

2.1 DESCRIPTION OF THE PLAN OR PROJECT

2.1.1 Description of the Proposed Development.

This application relates to a proposed new pedestrian access within Lucan Demesne Park in Lucan, County Dublin as shown on **Figures 2, 3** and **4** below.

The proposed development involves the construction of a timber boardwalk from the plaza to the existing river side path. The boardwalk comprises a largely wooden structure measuring approximately 120m in length, approximately 2.5m in width, and is elevated to variable degree depending on topography. The boardwalk proposed is made of timber predominantly, steel and stainless mesh. There will be railings on either side of the boardwalk to a height of 1.1m. The wood is treated to be weather durable and the wood itself is timber which is known for its highly variable properties. It is noted that part of the proposal involves the removal of invasive species.

The boardwalk proposed meanders between the existing car park and the existing path along the River Liffey and follows the route of an existing tarmacked pedestrian path. It is intended to have the boardwalk a predominant height of 0.15mm above the existing path but variable to spot topography. The proposal is set out in the landscape masterplan submitted by Cunnane Stratton Reynolds. The existing path will be removed and that original area will be allowed to revert to its original state. There will be a short area of no dig gravel at the end/start of the proposed

boardwalk. The boardwalk will be sufficiently above the existing terrain to allow such regrowth occur, there will be slats within the boardwalk itself to allow natural sunlight penetrate and the board walk itself will be sufficiently narrow to allow regrowth.

The boardwalk will be suspended above the ground by a number of semi submerged pylons. These will typically be 1.5m long and will be submerged into the ground to a distance of 1m. The pylons are 400mm in diameter. There are no significant earthworks required, no significant excavations nor trenches or foundations. The boardwalk will not be lit.

It is anticipated that the board walk will be assembled on site over a period of 2 weeks and this is taken to be the construction period. It is not anticipated that there will be any heavy machinery deployed in the construction of the board walk.

The use of the boardwalk will be over the same periods of opening as the existing park. Opening hours will not be extended to accommodate any additional use of the proposed park visitor amenities.

A benefit of the proposed boardwalk is that users will not be able to stray off the board walk in the manner that they would be able to stray off the existing tarmacadam path.

The boardwalk itself does not in any way stray closer to the river than the existing tarmac path and certainly does not reach or overhang the river.

During construction the digging will be done by hand and the equivalent of buggies and parks maintenance vehicles.

A Preliminary Construction Erosion and Sediment Control Plan and a Flood Risk Assessment produced by Tobin Consulting Engineers accompanies the planning application.

The current access to the Liffey Valley Park consists of a steep tarmac path from the carpark to the riverside pathway. The proposal will improve access for the less mobile and will greatly enhance appreciation of this part of the wider park. It is possible that as a result of the proposed development that numbers of visitors will increase but the proposed boardwalk and its guard rails will significantly deter members wandering through undergrowth in a manner that the existing path would not.

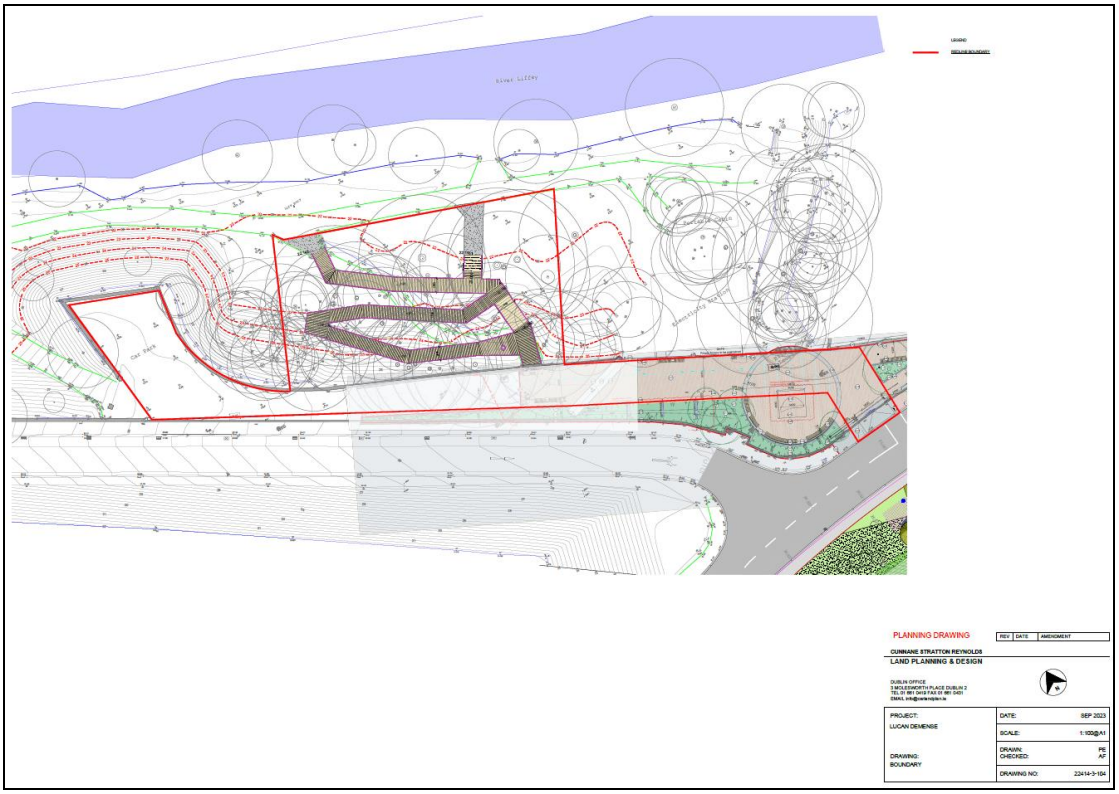

Figure 2. Proposed new access at Lucan Demesne – the site boundary is shown in red.

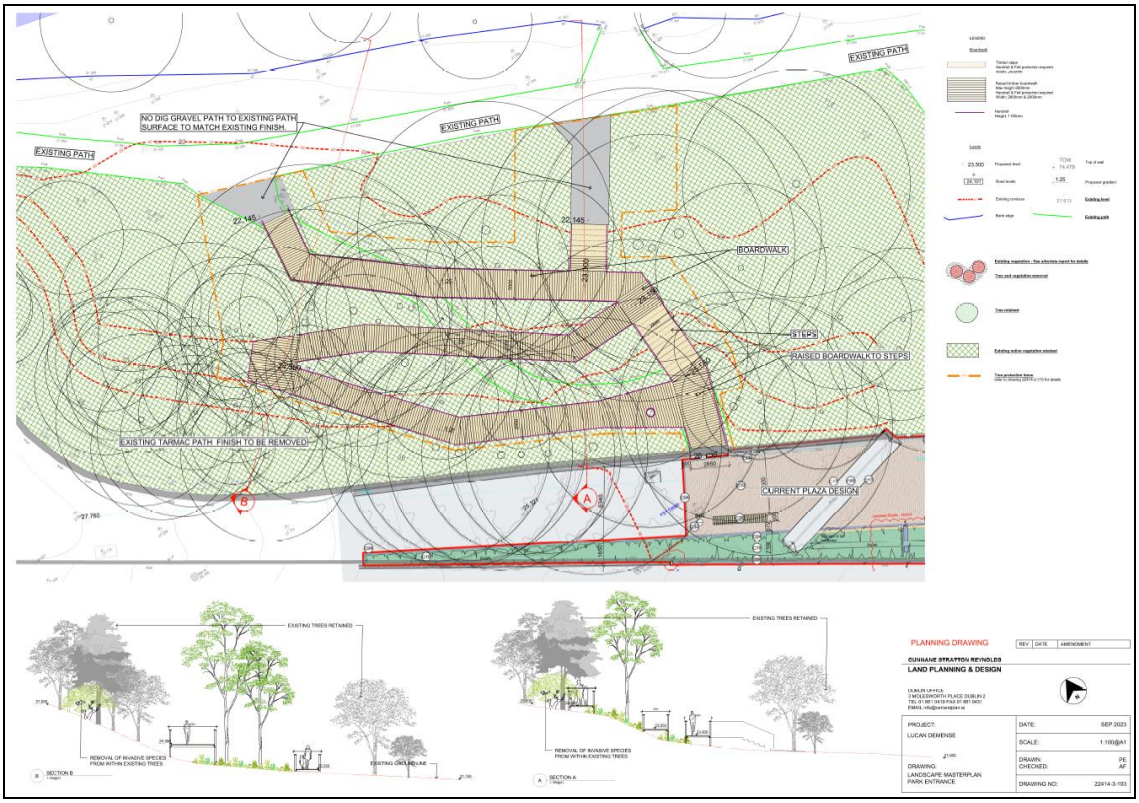

Figure 3. Boardwalk design.

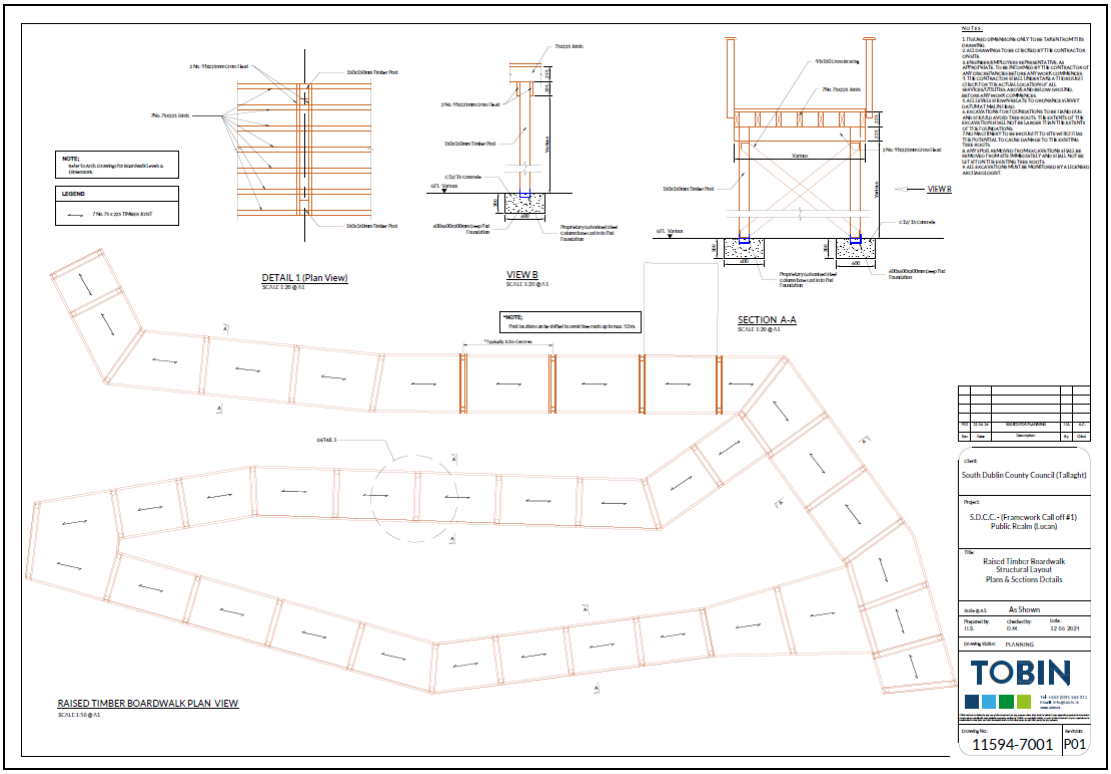

Figure 4. Timber boardwalk.

2.1.2 Description of the Receiving Environment at Lucan Demesne

The Boardwalk Site is located on the southern banks of the River Liffey within the Liffey Valley in a wooded area within Lucan Demesne, which is currently bisected by a footpath. The Lucan Stream is found in close proximity to this footpath (to the east) and the confluence of the Lucan Stream and the River Liffey is found to the north east of the site.

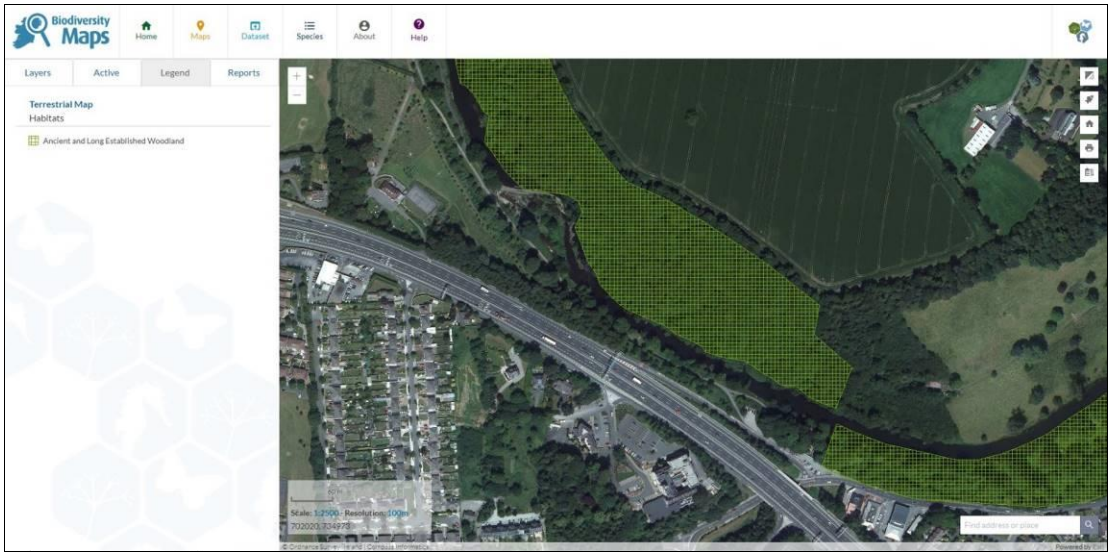

Figure 5. Woodland adjacent to the site and in St. Catherine's Park on the northern bank of the River Liffey has been mapped as Ancient and Long Established Woodland by National Parks and Wildlife Service.

The woodland block to the east of the proposed development site has been mapped by National Parks and Wildlife Service as Ancient and Long Established Woodland as can be seen on **Figure 5** above. Some of the trees along the river bank and within the woodland remain extant from the former demesne planting, while other planting in the area is associated with landscaping for the N4 road.

Habitats
The woodlands through which the boardwalk are proposed are dominated by Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*), Lime (*Tilia cordata*), Poplars (*Populus* sp.) and Horse chestnut (*Aesculus hippocastanum*). The understorey is dominated by Hawthorn (*Crataegus monogyna*), Elder (*Sambuccus nigra*), young Beech, Wych elm (*Ulmus glabra*). Large portions of the woodland understorey are dominated by the invasive non-native species Snowberry bush (*Symphoricarpos alba*).

The ground flora is poor in some parts on account of the deep shade cast by the Beech and is limited to Ivy (*Hedera helix*) and Bramble (*Rubus fruticosus* agg.). Elsewhere Nettles (*Urtica dioica*), Lesser burdock (*Arctium minus*), Pendulous sedge (*Carex pendula*), Wood sedge (*Carex sylvatica*), Wood avens (*Geum urbanum*), Herb robert (*Geranium robertianum*), and Hogweed (*Heracleum sphondylium*). These woodlands are best described as the habitat WD1 (Mixed) Broadleaved Woodland. A population of Ivy broomrape is found to the west of the proposed works area within the woodland.

The woodland contains some standing deadwood (mostly dead Wych elm) which is an important habitat from a biodiversity perspective and in some parts is in need of thinning. The woodland is well trampled and a series of trails arising from people and dogs criss cross the area reducing ground flora and compacting soils.

Along the banks of the River Liffey is a band of tall herbaceous vegetation indicative of annual flooding – species recorded here include the non-native invasive species Himalayan balsam (*Impatiens glandulifera*), which is a Third Schedule Invasive Species and significant stands of Snowberry bush (*Symphoricarpos alba*).

Native species typical of a river bank such as Meadowsweet (*Filipendula ulmaria*), Nettle, Hoary Willowherb (*Epilobium hirsutum*), Rosebay Willowherb (*Epilobium angustifolium*), Hedge bindweed (*Calystegia sepium*), Cleavers (*Galium aparine*), Spear thistle (*Cirsium arvense*), Creeping bet grass (Agrostis stolonifera), Field horsetail (*Equisetum arvense*), Cock's-foot grass (*Dactylis glomerata*), Wild angelica (*Angelica sylvestris*), Creeping thistle (*Cirsium repens*), Common figwort (*Scrophularia nodosa*), Creeping buttercup (*Ranunculus repens*), Tufted vetch (*Vicia cracca*), Sow thistle (*Sonchus* sp.), Hemp agrimony (*Eupatorium cannabinum*), Bush vetch (*Vicia sepium*), Cow parsley (*Anthriscus sylvestris*), Meadow vetchling (*Lathyrus pratensis*), Ground elder (*Aegopodium podagraria*), Bramble, and Coltsfoot (*Tussilago farfara*). There are informal tracks to the river through these areas.

No observations of the Green Figwort (*Scrophularia umbrosa*) were made along the river bank and it is thought that the habitat for this species is compromised by the invasive non-natives.

A treeline of mature Alder (*Alnus glutinosa*), Willow (*Salix cinerea*), Ash (*Fraxinus excelsior*), Crack willow (*Salix fragilis*) and Oak (*Quercus robur*), with Wych elm and

Hawthorn is found on the river bank. This is a narrow example of Riparian Woodland (WN5) and may have affinities to the priority Annex I habitat 91EO* alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*. This habitat is compromised by the Snowberry bush and Wayfaring tree (*Viburnum tinus*).

There are remnants of calcareous grassland (GS1) along the river margin in places with Knapweed (*Centaurea nigra*), Hoary ragwort (*Senecio erucifolius*), Coltsfoot – the mowing of grass in these areas and allowing the cuttings to remain reduces the diversity of this area.

Along the Tobermaclugg Stream Hart's tongue fern (*Phyllitis scolopendrium*) and Ivy was frequent on the bank.

There is dumping of sweepings from the tracks into the woodland and the riparian habitat. Along the edge of the existing tracks Greater plantain (*Plantago major*) was recorded.

There are signs of anti-social behaviour with littering and fires.

Invasive Species
The main invasive species noted in the general vicinity of the site include large stands of Himalayan balsam (*Impatiens glandulifera*) which were found on the bank of the River Liffey.

Other species recorded include:

- Snowberry bush (*Symphoricarpos alba*),
- Old man's beard (*Clematis vitalba*), and
- Buddleia (*Buddleia davidii*).

There are also historical records of Giant Hogweed (*Heracleum mantegazzianum*) so this species may turn up in the works area.

<u>Rare & Protected Flora</u>

Flora (Protection) Order 2022
There are a number of plant species which are legally protected under the Flora (Protection) Order 2022 found within the 1okm square in which the Liffey Valley is located (O03).

These include:

- Red Hemp-nettle (*Galeopsis angustifolia*)
- Hairy St. John's-wort (*Hypericum hirsutum*)
- Opposite-leaved Pondweed (*Groenlandia densa*)
- Meadow Barley (*Hordeum secalinum*)
- Betony (*Betonica officinalis*)
- Hairy violet (*Viola hirta*)

Old Woodland Specialists

The woodlands in the Liffey Valley (and particularly at St. Catherine's on the north bank of the River Liffey opposite the development site) are very important for the rich variety of rare woodland plants, which have been recorded there.

These include Yellowbird's nest (*Monotropa hypopitys*). This species was first recorded here by Wade 'under beech trees in St. Catherine's' (pers. comm. to J.T. Mackay) as recorded in Mackay's Catalogue (Mackay, 1825) and Flora Hibernica (Mackay, 1836). The species was recorded by Robert Lloyd Praeger in St. Catherine's in 1934, but has not been seen since.

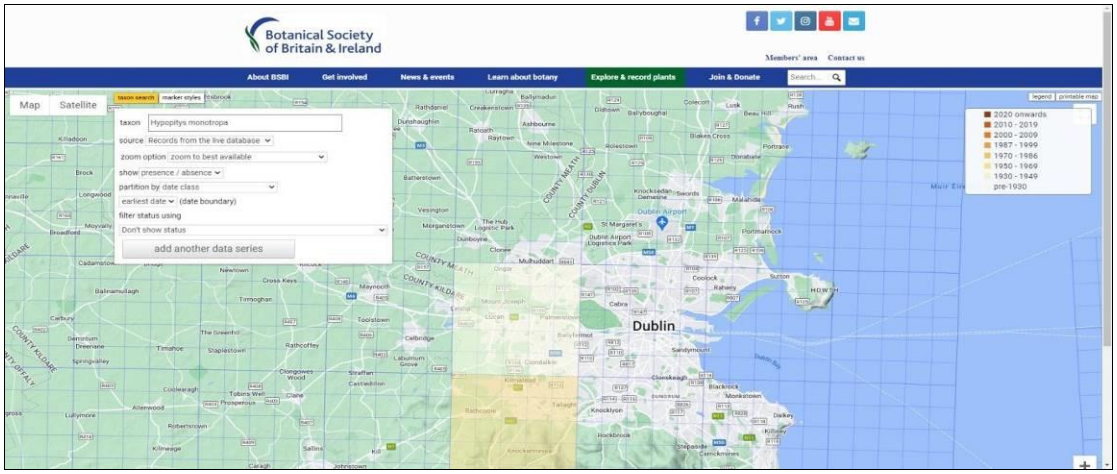

Figure 6. Records of Yellowbird's nest (*Monotropa hypopitys*) from the Lucan area (Source: Botanical Society of Britain and Ireland).

The presence of this species coupled with others such as Bird's-nest orchid (*Neottia nidus-avis*), Toothwort (*Lathraea squamaria*) (which is also known from St. Catherine's), Sword-leaved helleborine (*Cephalanthera longifolia*), Wood Millet (*Millium effusum*), Wood Fescue (*Festuca altissima*), Intermediate Wintergreen (*Pyrola media*) and Common Wintergreen (*Pyrola minor*) were proposed by Praeger as species associated with older woodland.

Other indicator species of old woodland present in the Liffey Valley Woods in this area are mostly recorded from St. Catherine's Woods on the north side of the River Liffey from the proposed development site.

These include; Yellow Archangel (*Lamiastrum galeobdolon*) and Hairy St. John's-wort (*Hypericum hirsutum*), while Green figwort (*Scrophularia umbrosa*) was first recorded along the Liffey banks at 'St. Catherine's of Lucan Demesne' between 1901 and 1904 (Colgan, N., 1904).

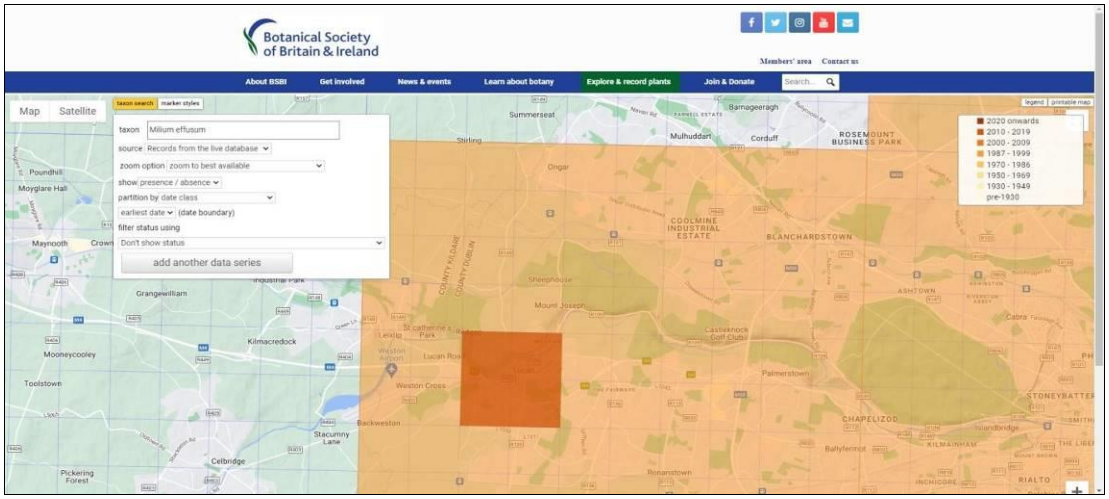

Figure 7. Records of Wood Millet (*Milium effusum*) from the Lucan area (Source: Botanical Society of Britain and Ireland).

Hairy St. John's-wort (*Hypericum hirsutum*)

The National Biodiversity Data Centre contains a number of records of Hairy St. John's-wort (*Hypericum hirsutum*) from this section of the Liffey Valley Woodlands. These include records to within 100m which are shown on **Figure 8** below.

Jamie O'Neill recorded a population of Hairy St. John's-wort within Lucan Demesne as indicated by the red circle on **Figure 8** below. The population here was recorded 'Growing in a shady hedgerow near the pond'.

The majority of the records are found in St. Catherine's Park. None of them are found in the proposed development site.

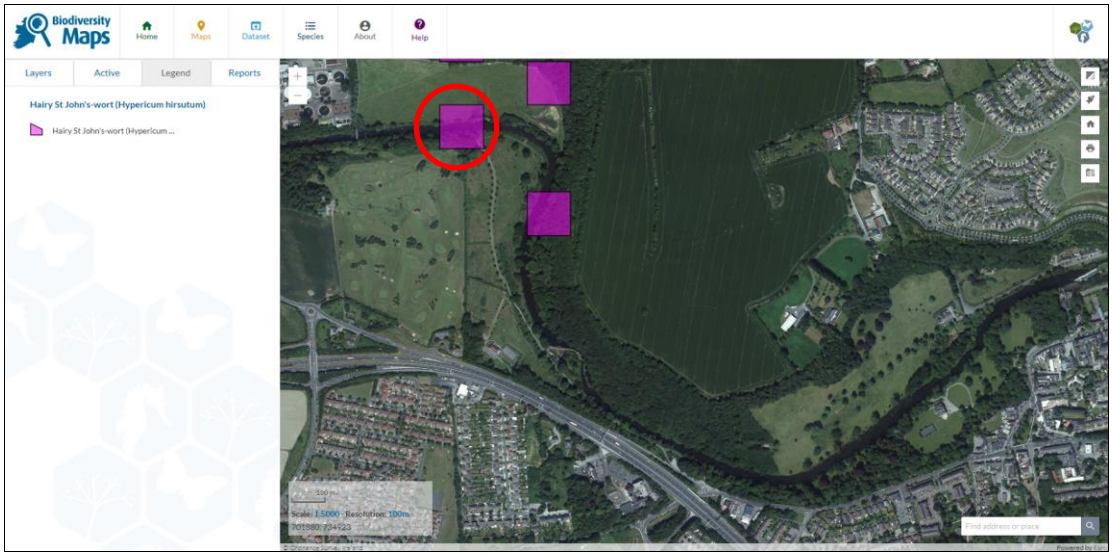

Figure 8. Records of Hairy St. John's-wort (*Hypericum hirsutum*) from this section of the Liffey Valley Woodlands (Source: National Biodiversity Data Centre). The population found in Lucan Demesne is circled in red.

Toothwort (*Lathraea squamaria*)

The National Biodiversity Data Centre contains a number of records of Toothwort (*Lathraea squamaria*) from this section of the Liffey Valley Woodlands. These records all relate to the woodlands in St. Catherine's Park as opposed to Lucan Demesne. These include records of Toothwort held by the Botanical Society of Britain and Ireland which are at a 2km level as well as records to within 100m. These are shown on **Figure 9** below.

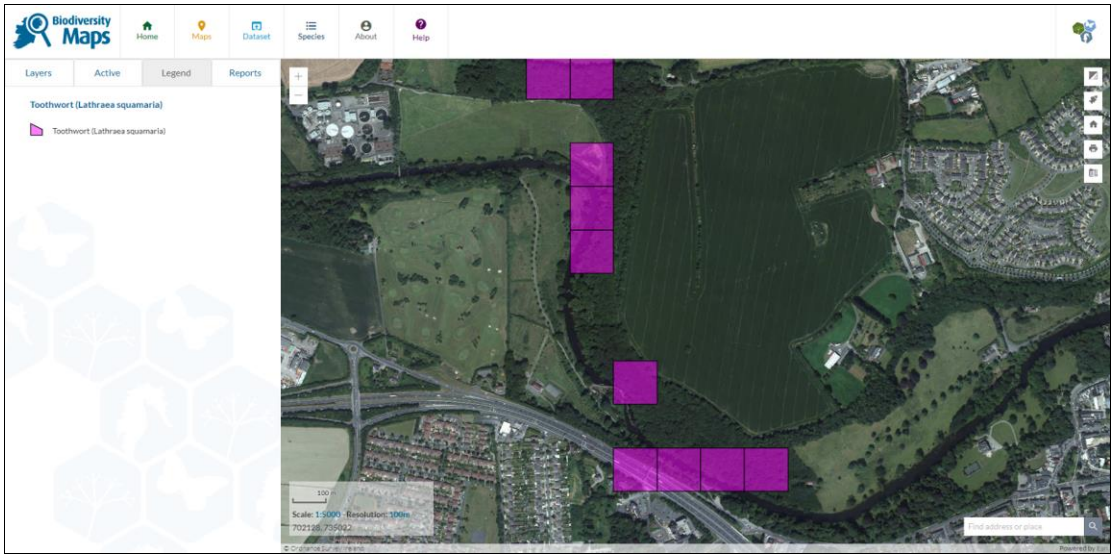

Figure 9. Records of Toothwort (*Lathraea squamaria*) from the Lucan area (Source: National Biodiversity Data Centre).

Yellow Archangel (*Lamiastrum galeobdolon*)

The National Biodiversity Data Centre contains a number of records of Yellow Archangel (*Lamiastrum galeobdolon*) from this section of the Liffey Valley Woodlands. The majority of these are from the environs of St. Catherine's Park as shown on **Figure 10**. There are no records of this species from the proposed development area.

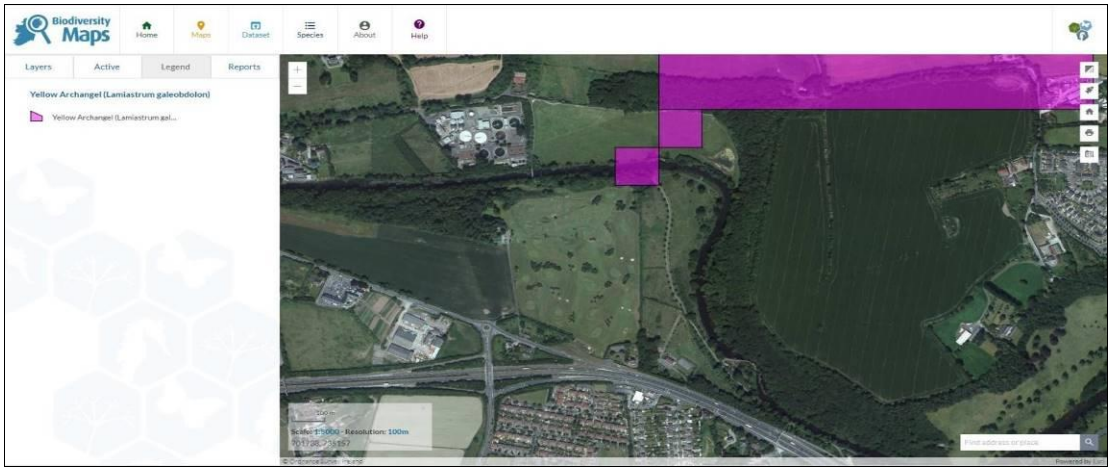

Figure 10. Records of Yellow Archangel (*Lamiastrum galeobdolon*) from the Lucan area (Source: National Biodiversity Data Centre).

Green Figwort (*Scrophularia umbrosa*)

Populations of Green Figwort (*Scrophularia umbrosa*) are known from the wider River Liffey as shown on **Figure 11**.

The National Biodiversity Data Centre contains a number of records of Green Figwort from St. Catherine's Park on the other side of the Liffey as shown on **Figure 11**. None of these records relates to the proposed development area.

These include records held by the Botanical Society of Britain and Ireland which are at a 2km level as well as records to within 100m made by Jamie O'Neill who recorded 5 plants of Green Figwort on 13/07/2017, 10 plants on 15/07/2018, 49 plants on 20/07/2019, 11 plants on 10/07/2020 all from the area of the Sluice within St. Catherine's Park.

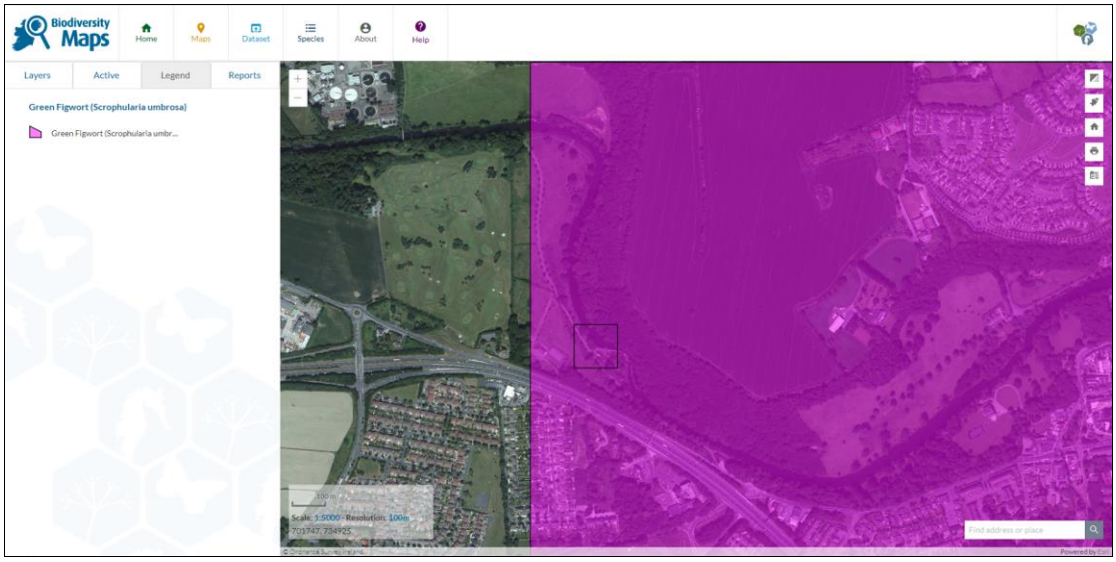

Figure 11. Records of Green Figwort (*Scrophularia umbrosa*) from Lucan (Source: National Biodiversity Data Centre).

Ivy Broomrape (*Orobanche hederae*)

Populations of Ivy Broomrape (*Orobanche hederae*) are known from the wider River Liffey as shown on **Figure 12**.

The National Biodiversity Data Centre contains a number of records of Ivy Broomrape from St. Catherine's Park as shown on **Figure 12**. None of these NBDC records relates to the proposed development area.

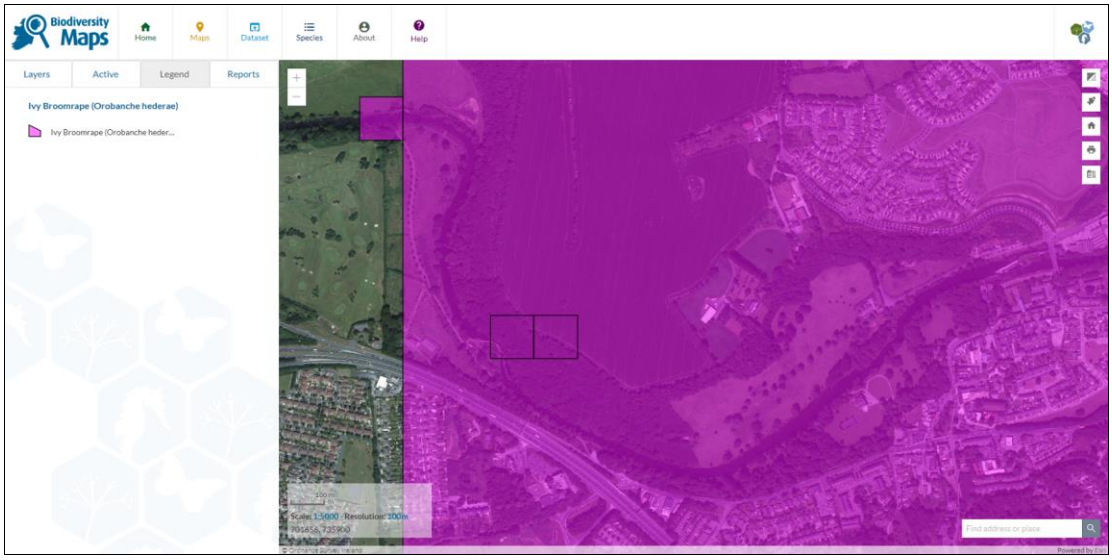

Figure 12. Records of Ivy Broomrape (*Orobanche hederae*) from Lucan (Source: National Biodiversity Data Centre).

Doherty (2021) noted a population of Ivy Broomrape growing along the bankside of the River Liffey within the footprint of the Demesne Park Entrance. The current surveys recorded a population of Ivy broomrape just inside the stone wall beside the car park during the site visit on 30th August 2023.

Plate 1. Ivy broomrape near the proposed works area.

Fauna - Bats

Records of known roosts, ad hoc observations and transects recorded during the All Ireland Daubenton's Monitoring Scheme, Irish Car Based Bat Monitoring Survey and projects such as the BATLAS 2010 and 2020 projects are recorded in the Bat Conservation Ireland database, which was accessed.

A variety of species have been recorded either foraging or commuting from the wider landscape within a 10km radius of St. Catherine's Park and Lucan Demesne, and these include:

- Brown long eared bats (*Plecotus auritus*),
- Natterer's bat (*Myotis nattereri*),
- Whiskered bat (*Myotis mystacinus*),
- Daubenton's bat (*Myotis daubentonii*),
- Leisler's bat (*Nyctalus leisleri*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*),
- Common pipistrelle (*Pipistrellus pipistrellus*),
- Unidentified Pipistrelle species, and
- Unidentified *Myotis* species.

This data search revealed a number of other bat roosts in the general vicinity of Lucan including records from St. Catherine's Park but very few from Lucan Demesne.

The bat survey of the proposed development area was completed on the 3rd October 2023. The survey recorded lots of bat activity in the vicinity of the proposed works area where the river corridor remains dark. The survey began at 19:00 and concluded at 21:00. The first bat was detected at 19:24.

Six species in total were recorded. These were:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Leisler's bat (*Nyctalus leisleri*)
- Daubenton's bat (*Myotis daubentonii*)
- Brown long-eared bat (*Plecotus auritus*)
- Possible Whiskered/ Brandt's bat (*Myotis mystacinus/ brandtii*)

Sonograms of some of the bats detected are presented below on **Figures 13** to **18**. Bats were recorded foraging within proposed ramp location as well as over the Liffey River.

It was noted that there is already quite a lot of light spill impacting on the river from the adjoining N4 road and the proposed development should not add to that as these lit areas were avoided by Daubenton's bats as a result.

A large number of social calls were recorded. The underside of the small bridge over the Tobermaclugg Stream was also examined and has roosting potential.

Figure 13. Bat registrations in Lucan Demesne.

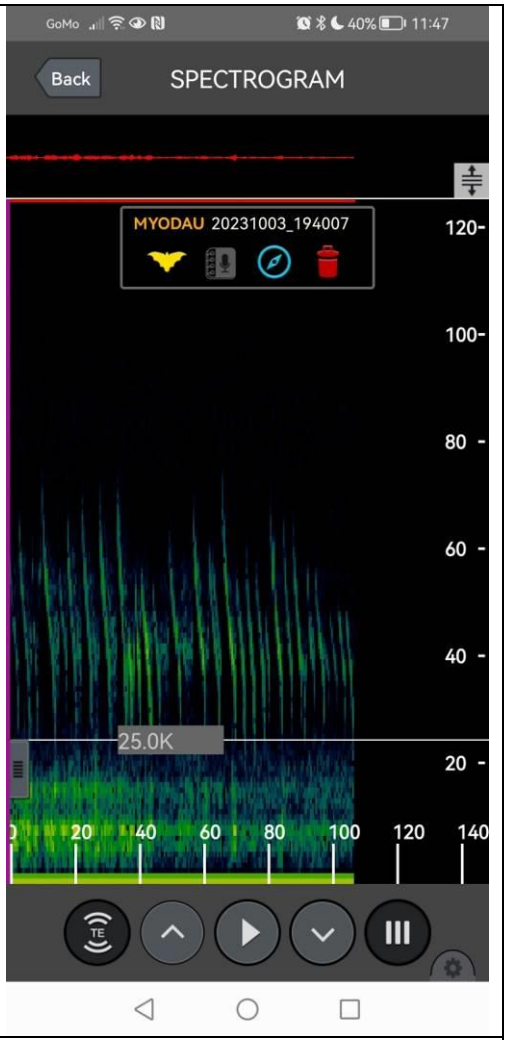

Figure 14. Sonogram of Daubenton's bat.

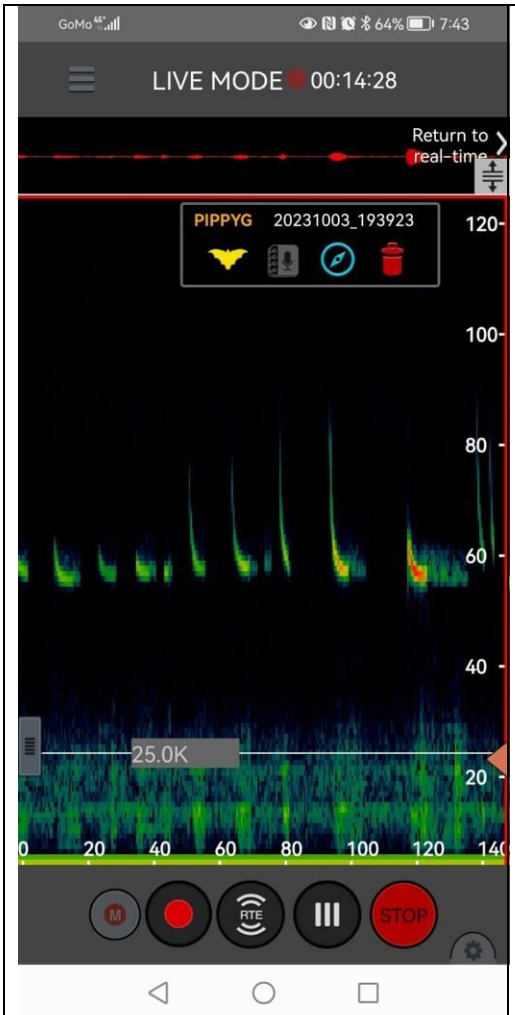

Figure 15. Sonogram of Soprano pipistrelle bat.

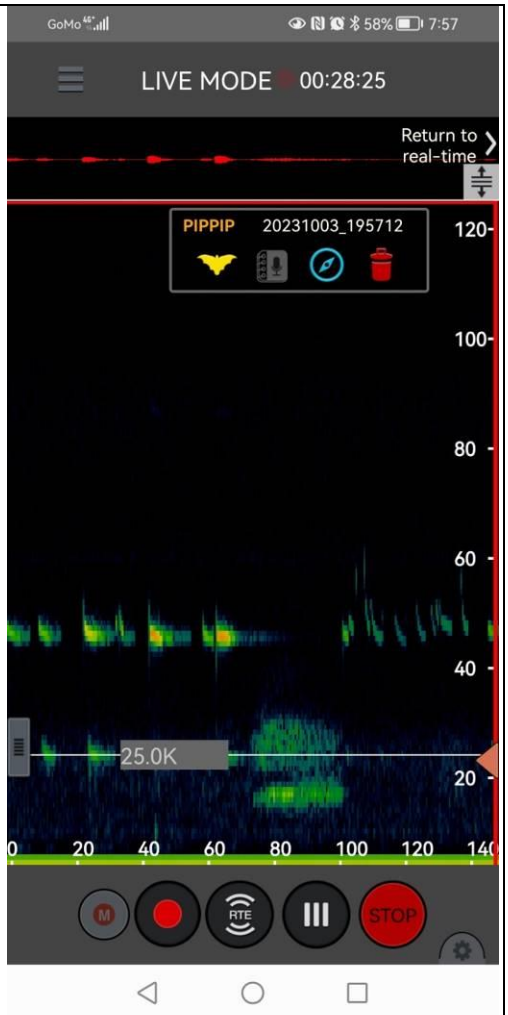

Figure 16. Sonogram of Common pipistrelle bat.

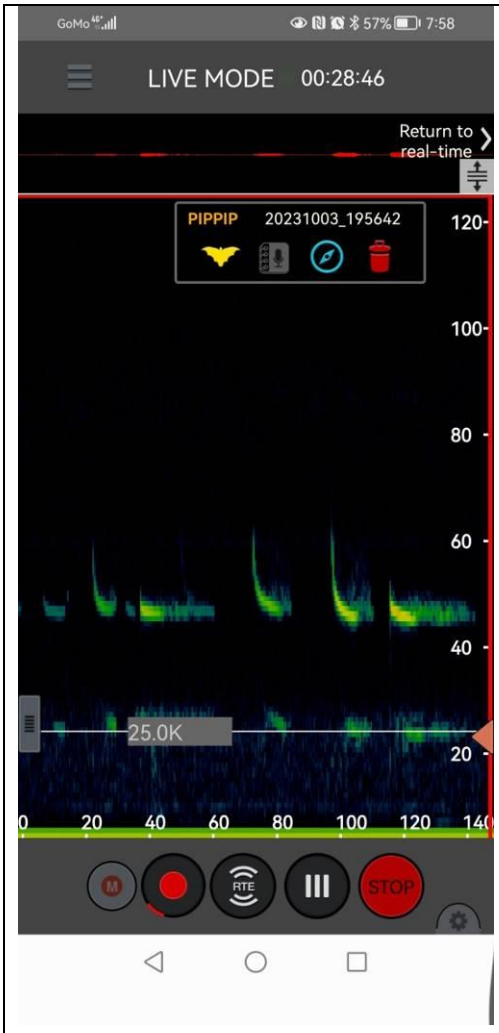

Figure 17. Sonogram of Leisler's bat and Common pipistrelle bat.

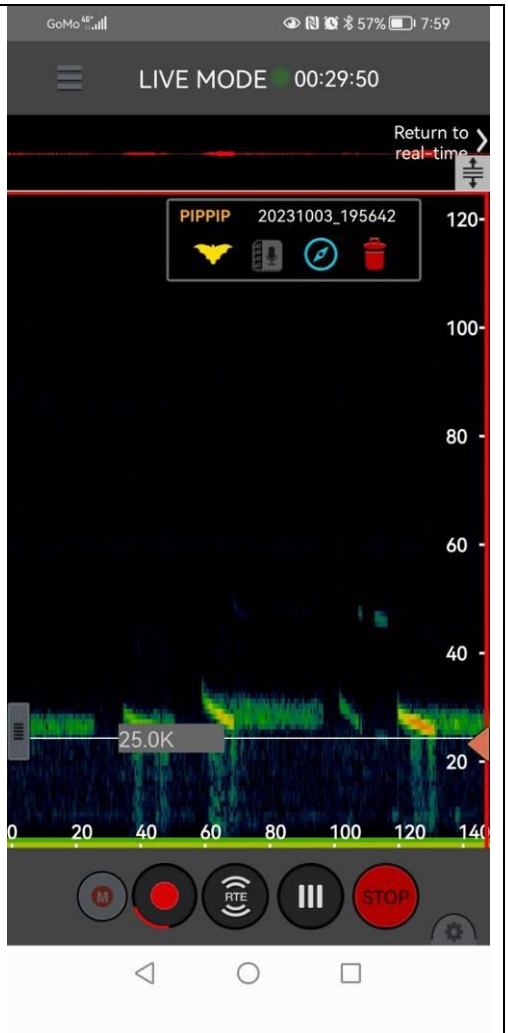

Figure 18. Sonogram of Leisler's bat.

Fauna – Otter

Otter was confirmed from within the environs of the boardwalk site by Doherty (2021) during the Assessment for Lucan Public Realm Liffey Promenade & Demesne Park Entrance who noted 'An otter spraint was observed at the opening of the Tobermaclugg Stream a short distance upstream of its confluence with the Liffey during a field visit to the site in April 2021'.

As a species Otter require undisturbed sections of river with good water quality and abundant availability of prey with secluded areas and 'cover' in which to hunt, rest and breed.

The 2019 survey noted that 'Both banks of the Liffey featured relatively high (sometimes very high) levels of human disturbance in terms of human activity, modified land use and or a lack of otter seclusion. In the middle survey reaches, most otter signs were associated with instream islands, away from direct human disturbance pressures'.

The section of the river adjoining the woodland where the boardwalk is proposed for has large amounts of both human and canine activity all of which reduce it's

favourable condition for Otter. Furthermore there is a lack of riparian woodland in much of this area which would help to provide cover for Otter as well as non-native invasive species such as Himalayan balsam, which outcompete native vegetation and further reduce cover for Otter when they die back in the winter.

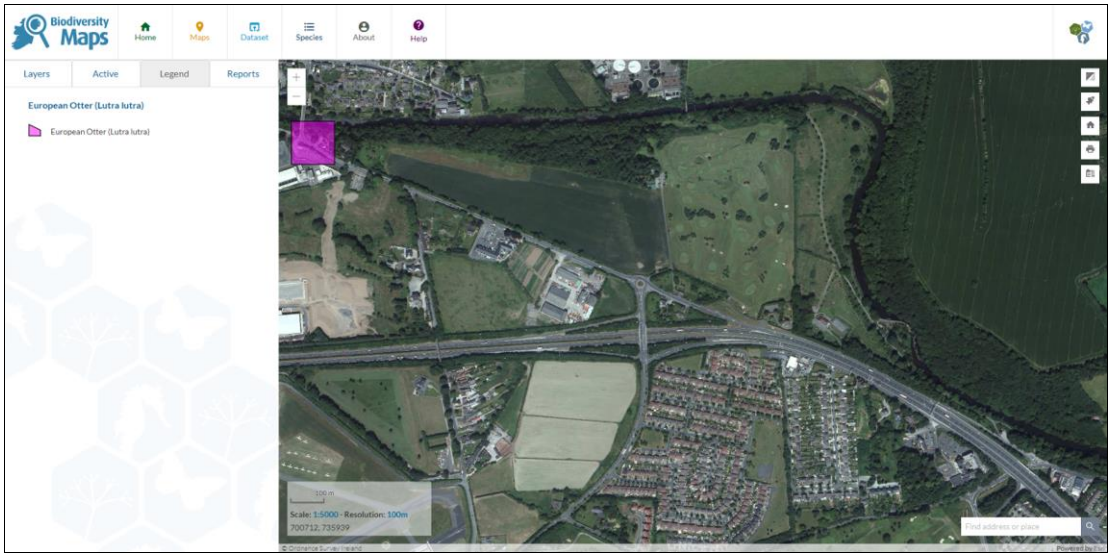

Figure 19. Otter records from Lucan (NBDC).

The presence of otter was confirmed during the site visit on 3rd October 2023 when a spraint was noted on a stone at the river margin near the proposed boardwalk development.

Fauna - Badger

There was no evidence of badger (*Meles meles*) using the section of woodland in which the works are proposed. No tracks, setts, latrines, snuffle holes or other signs of badger were observed.

Other Fauna

There are no records of Pine marten (*Martes martes*) from Lucan Demesne at present but there are both live sightings and road kill records of this species from both upstream and downstream of Lucan held by the National Biodiversity Data Centre (see **Figure 20**) so the species is present within the Liffey Valley.

The NBDC holds records of Sika deer (*Cervus nippon*) from the Liffey Valley, while further downstream Fallow deer (*Dama dama*) are present as shown on **Figure 21** below.

The most recent study completed by Morera-Pujol, *et al.* (2023) also has records of both species from the Liffey Valley.

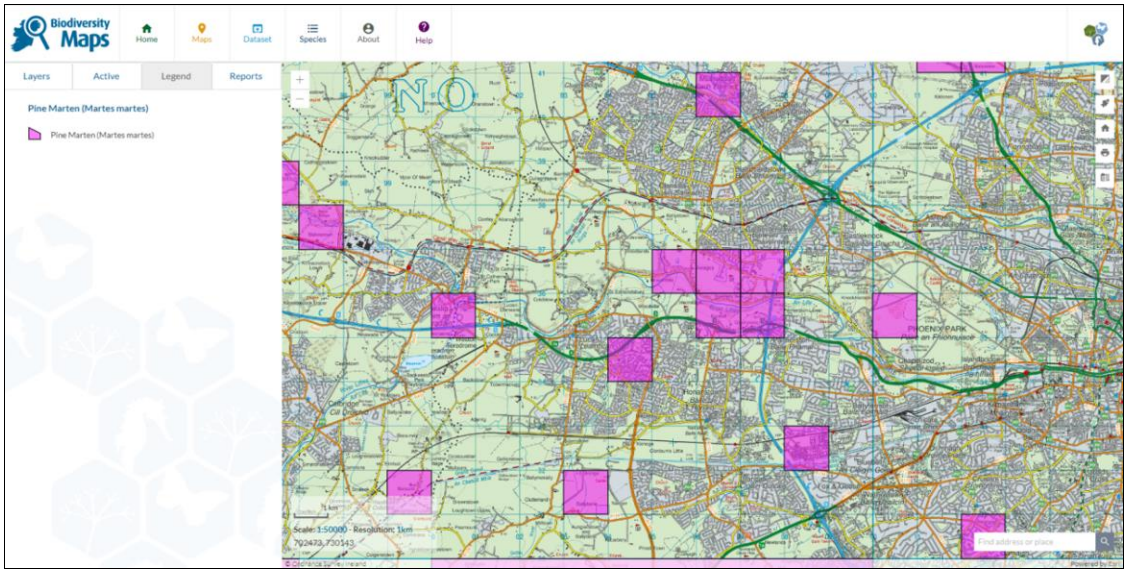

Figure 20. Pine marten records from the Liffey Valley (Source: NBDC).

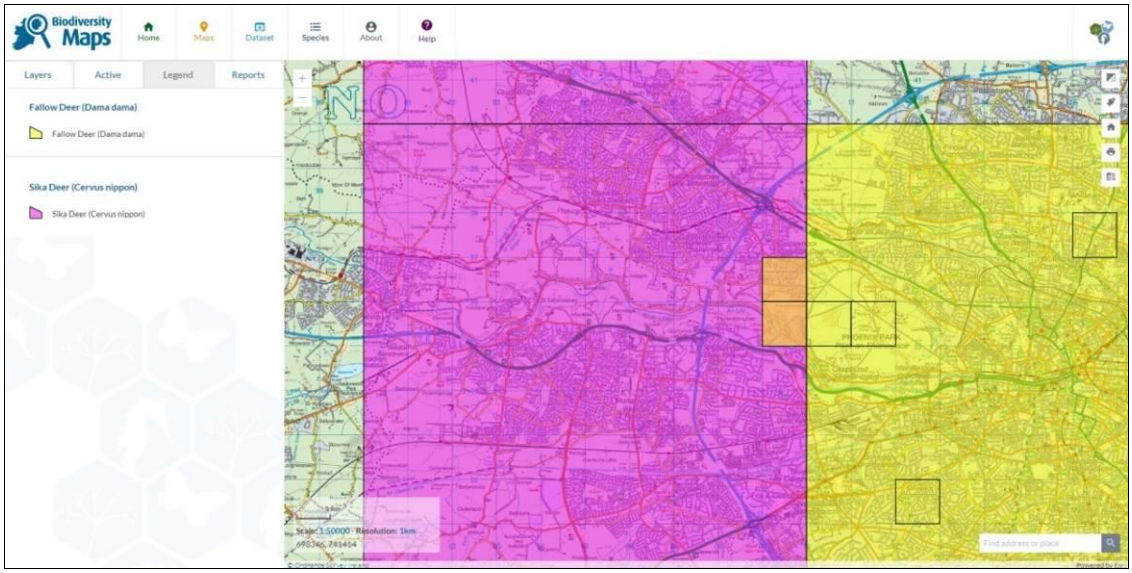

Figure 21. Deer records from the Liffey Valley (Source: NBDC).

A fox (*Vulpes vulpes*) was both seen and heard during the site visits. Other common fauna that would be expected include brown rat (*Rattus norvegicus*), long tailed field mouse (*Apodemus sylvaticus*), house mouse (*Mus musculus*), hedgehog (*Erinaceus europaeus*), and pygmy shrew (*Sorex minutus*). Irish stoat (*Mustela erminea hibernica*) may also occur. The non-native and invasive grey squirrel (*Sciurus carolinensis*) is also frequent in the Liffey Valley as is American mink (*Mustela vison*).

Birds

The bird fauna recorded was rich and a good variety of species associated with woodland and scrub were recorded. Species recorded include blackbird, robin, goldfinch, wren, blue tit, song thrush, bullfinch, chaffinch, starling, woodpigeon, dunnock, jackdaw, and greenfinch.

Corvid species recorded include; rook, magpie, hooded crow and jackdaw. Birds of prey such as buzzard and sparrowhawk have been confirmed using the general area and summer visitors, such as willow warbler and swallow may occur. Species such

as redwing and fieldfare may visit during the winter months. Waterbirds associated with the River Liffey include Mallard, Grey heron, Cormorant and Kingfisher (see below).

Kingfisher
Kingfisher have been recorded regularly on this section of the River Liffey including as recently as 23/02/2023 from Lucan Demesne. Kingfishers require an undisturbed river in which to breed, roost and hunt, as well as excellent water quality.

Fisheries
Eleven fish species have been recorded in total from surveys conducted by Inland Fisheries Ireland of the River Liffey. These are: Brown trout, Three-spined stickleback, Minnow, Stone loach, Eel, Lamprey, Salmon, Pike, Perch, Roach, and Gudgeon (Donovan et al. (2022)).

The River Liffey is a highly modified watercourse which has been subject to anthropogenic influences for many hundreds of years. These include the development of mills with associated weirs all of which pose a barrier to fish migration.

Lucan Demesne is located within the Liffey and Dublin Bay catchment in Hydrometric Area 09 and in the Liffey Sub-Catchment (Liffey_SC_100). The River Liffey flows through the Demesne. Water samples are taken from the river upstream of the Demesne at Leixlip Bridge and within the Demesne in Liffey Valley Park as shown on **Figure 22.** Water quality upstream of the park is currently classified as 'Good' (i.e. Q 4), whereas within the park it is classified as 'Poor' (i.e. Q 3).

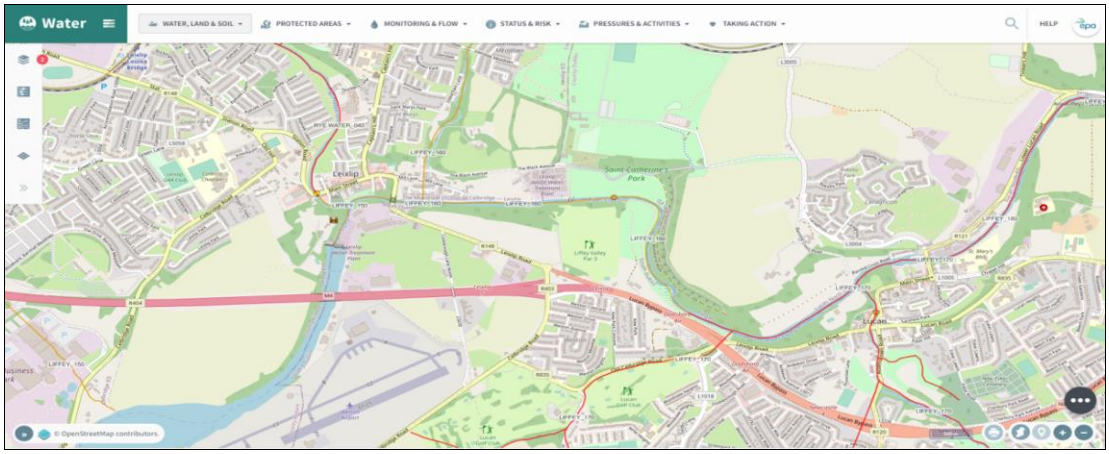

Figure 22. Water quality within the River Liffey is currently assessed as 'Poor' and it is listed as a watercourse 'At Risk' of not achieving 'Good Water Status' under the Water Framework Directive.

The section of the River Liffey within the Demesne is currently listed as a watercourse 'At Risk' of not achieving 'Good Water Status' under the Water Framework Directive. It was previously listed between both 2013 – 2018 and 2016-2021 as a watercourse of 'Poor' water quality 'and At Risk' of not achieving 'Good Water Status'.

2.2 ASSESSMENT OF RELEVANCE OF PROPOSED DEVELOPMENT TO NATURA 2000 SITES

In line with the European Commission Methodological Guidance (EC (2001) and EC (2021)) and the DoEHLG Guidance (DoEHLG (2010)) a review of all European sites that could be potentially affected by the proposed project was made using the NPWS online map viewer. These included any European sites within or adjacent to the land at Lucan and any European sites within the likely zone of impact of the proposed development (using the source – pathway – receptor criteria) including any downstream. These are summarised in **Table 2.2** below and shown on **Figure 23**.

The lands proposed for development at Lucan Demesne are not currently designated for any nature conservation purposes and there are no Natura 2000 sites located either within or directly adjacent to the lands.

The River Liffey is the only ecological link (source-pathway-receptors) between the lands at Lucan Demesne and any Natura 2000 site as the River Liffey and the Natura 2000 sites in Dublin Bay lie within the potential zone of influence of the proposed development. These are:

- North Dublin Bay SAC (000206)
- South Dublin Bay SAC (000210)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- North Bull Island SPA (004006)

As negative impacts on these Natura 2000 sites are highly unlikely by virtue of distance the proposed development at Lucan Demesne will have no direct relevance to these protected sites and they are not considered further in this report.

Three other European sites have been identified within a 15km radius. These are all Special Areas of Conservation (SACs) as follows:

- 001398 Rye Water Valley/Carton SAC
- 001209 Glenasmole Valley SAC
- 002122 Wicklow Mountains SAC

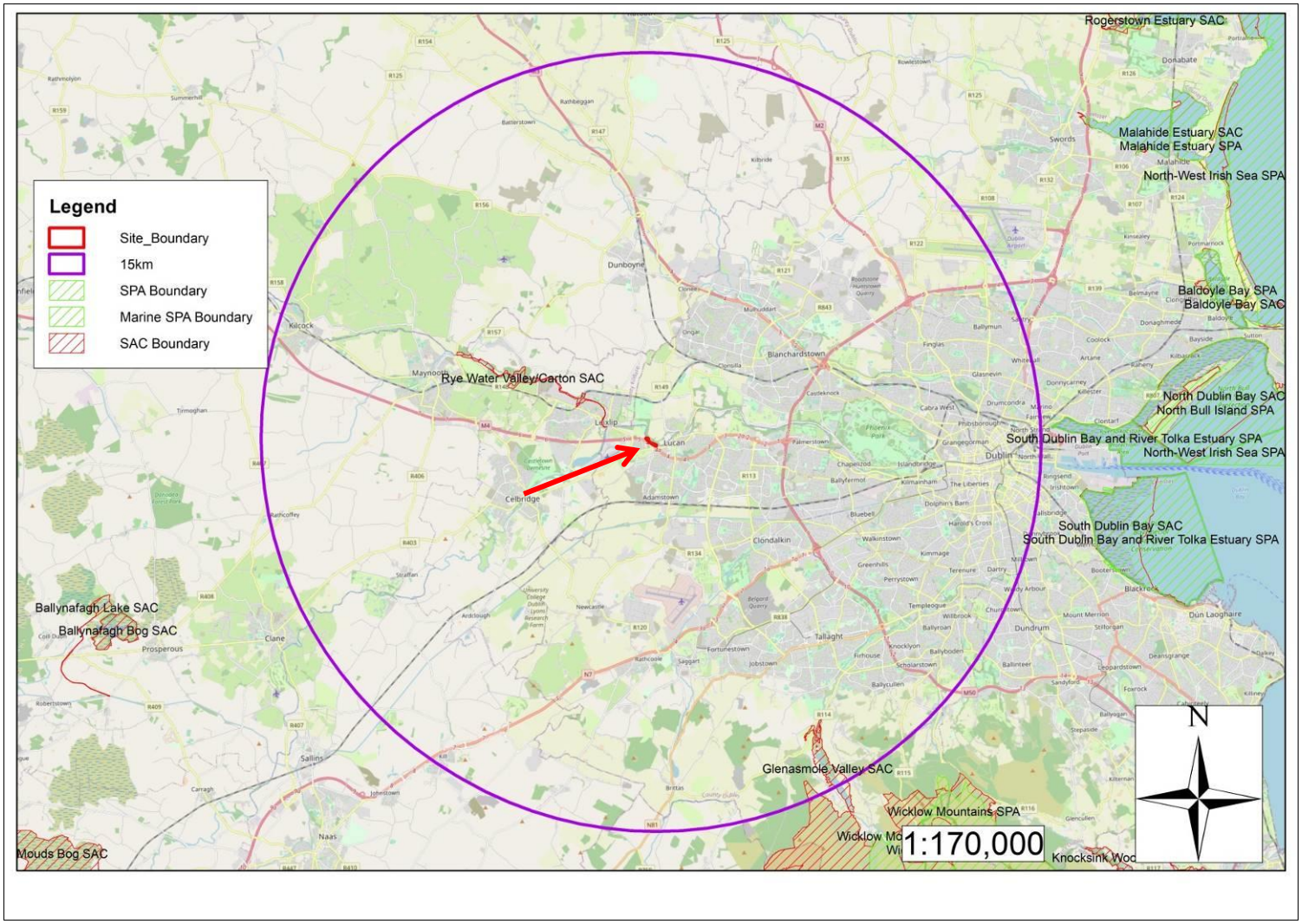

Figure 23. Identified sites of international conservation importance. Lucan Demesne is indicated by the red arrow.

Table 2.2. Designated European Sites of relevance to the proposed development at Lucan Demesne.

Site Code	Site Name and Designation	Approximate distance from Lucan Demesne	Qualifying Interest and Conservation Objectives	Discussion of Source-Pathway-Receptor Link/Potential for Likely Significant Effects
001398	Rye Water Valley/Carton SAC	2.1km NW and upstream	Source: NPWS (2021). Conservation Objectives: Rye Water Valley/Carton SAC 001398. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. Accessed 8th May 2024. To maintain the favourable conservation condition of the Annex I habitats and species for which the SAC has been selected: • Petrifying springs with tufa formation (Cratoneurion) [7220] • Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] • Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016]	The surface waters (i.e. the run-off from the site) currently discharge to the River Liffey which forms a Source-Pathway-Receptor Link between the proposed development and this European Site which is upstream of Lucan Demesne. The QI of the Rye Water Valley/Carton SAC are the tufa springs and the *Vertigo* snails associated with them which would not be impacted by any discharges from the site which would be carried downstream. Therefore there is no possibility of any likely significant effects and there is no reasonable scientific doubt in relation to this conclusion.
001209	Glenasmole Valley SAC	12.3km SE	Source: NPWS (2021). Conservation Objectives: Glenasmole Valley SAC 001209. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. Accessed 8th May 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) (*important orchid sites) • (6410) *Molinia* meadows on calcareous, peaty or clavey-silt-laden soils (*Molinion caeruleae*)	There is no direct or in-direct Source-Pathway-Receptor link between this site and the proposed development. Therefore there is no possibility of any likely significant effects and there is no reasonable scientific doubt in relation to this conclusion.

Site Code	Site Name and Designation	Approximate distance from Lucan Demesne	Qualifying Interest and Conservation Objectives	Discussion of Source-Pathway-Receptor Link/Potential for Likely Significant Effects
			• (7220) Petrifying springs with tufa formation (*Cratoneurion*)	
002122	Wicklow Mountains SAC	14.3km SE	Source: NPWS (2017) Conservation Objectives: Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 8th May 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • (3130) Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea* • (3160) Natural dystrophic lakes and ponds, • (4010) Northern Atlantic wet heaths with *Erica tetralix*, • (4030) European dry heaths, • (4060) Alpine and Boreal heaths, • (6230) Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas, • (7130) Blanket bog (*active only), • (8110) Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*), • (8210) Calcareous rocky slopes with chasmophytic vegetation, • (8220) Siliceous rocky slopes with chasmophytic vegetation, • (9990) Blanket bog (not active), • (1355) Otter (*Lutra lutra*).	There is no direct or in-direct Source-Pathway-Receptor link between this site and the proposed development. Therefore there is no possibility of any likely significant effects and there is no reasonable scientific doubt in relation to this conclusion.

SECTION 3 DESCRIPTIONS OF NATURA 2000 SITES

There are no Natura 2000 sites located within or adjacent to the site at Lucan Demesne. The Natura 2000 sites of relevance to the proposed development at Lucan Demesne and their conservation objectives are listed in **Table 2.2** above.

This report for Screening for Appropriate Assessment has examined the conservation objectives for each of the relevant Natura 2000 sites and has determined that the proposed development and subsequent use of the lands at Lucan Demesne will have no negative impacts on same.

SECTION 4 ASSESSMENT OF POTENTIAL IMPACTS

4.1 ASSESSMENT OF PROPOSED DEVELOPMENT AT LUCAN DEMESNE

The potential impacts of the proposed development at Lucan Demesne on nearby Natura 2000 sites were assessed using the following factors:

- size and scale
- land-take
- distance from the Natura 2000 site or key features of the site
- resource requirements (water abstraction etc.)
- emissions (disposal to land, water or air)
- excavation requirements
- transportation requirements
- duration of construction, operation, decommissioning, etc.
- reduction of habitat area
- disturbance to key species
- habitat or species fragmentation
- reduction in species density
- changes in key indicators of conservation value (water quality etc.)
- climate change
- key relationships that define the structure of the sites
- key relationships that define the function of the site

Brief description of the project or plan	Development of a new access within Lucan Demesne. These works will require the following: • Temporary landtake (e.g. working areas within the site); • Construction activities (e.g. runoff and other pollution, increase of suspended solids, alteration of hydraulic conditions and noise and dust emissions); and, • Permanent landtake for the boardwalk.
Brief description of the Natura 2000 sites	There are no Natura 2000 sites either within or directly adjacent to the proposed development site at Lucan Demesne.

	The identified Natura 2000 sites of relevance to Lucan Demesne are detailed above in **Table 2.2**.
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites	Water quality impacts have been taken into account during the proposed development at Lucan Demesne. The development of the new access to Lucan Demesne will have no impacts on any Natura 2000 site and there are no cumulative elements expected which are likely to give rise to impacts on any Natura 2000 site.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of: • **size and scale;** • **land-take;** • **distance from the Natura 2000 site or key features of the site;** • **resource requirements (water abstraction etc.);** • **emissions (disposal to land, water or air); excavation requirements;** • **transportation requirements;** • **duration of construction, operation, decommissioning, etc.;** • **other**	The proposed development is not within or directly adjacent to any Natura 2000 site, therefore there will no impacts arising from the project regarding size and scale or land-take. The proposed development site is over 1.5km downstream from the nearest Natura 2000 site (Rye Water Valley/Carton SAC). Apart from the Dublin Bay Natura 2000 sites, significant impacts on which are ruled out on account of distance, there are also no potential ecological or hydrological links to the other Natura 2000 sites listed in **Table 2.2**. There are no requirements to abstract water from any Natura 2000 site or potential hydrological impacts on same arising from the proposed works. Any potentially polluted surface water associated with the proposed works such as silt laden waters, etc. will be captured during the construction period by the pollution control systems. Due to the distance of the lands from the boundary of any Natura 2000 sites and the proposed pollution control systems during the works, no significant indirect effect on the Qualifying Interests/Species of Conservation Interest is predicted as a result of the proposed works. Due to the location of the proposed development at distance from any Natura 2000 site, there are also no impacts to Natura 2000 sites expected from transportation, duration of construction, operation, or decommissioning of any element of the development.
Describe any likely changes to the site arising as a result of: • **reduction of habitat area**	Due to the distance of the proposed development from any Natura 2000 site there are no changes expected to any Natura 2000

• **disturbance to key species;** • **habitat or species fragmentation;** • **reduction in species density;** • **changes in key indicators of conservation value (water quality etc.);** • **climate change**	site relating to habitat or species reduction, changes to key indicators of conservation value, or to climate change.
Describe any likely impacts on the Natura 2000 site as a whole in terms of: • **interference with the key relationships that define the structure of the site** • **interference with key relationships that define the function of the site**	There will be no impacts on any Natura 2000 site as a whole in terms of interference with the key relationships that define the structure of the site or interference with key relationships that define the function of the site.
Provide indicators of significance as a result of the identification of effects set out above in terms of: • **Loss** • **Fragmentation** • **Disruption** • **Disturbance** • **Change to key elements of the site (e.g. water quality etc.)**	There will be no impacts to any Natura 2000 sites relating to loss, fragmentation, disruption, disturbance, or changes to key elements of the site.
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	There will be no direct, indirect, or cumulative impacts from the proposed development on any Natura 2000 sites.

Cumulative/in Combination Effects

The EC Habitats Directive, the Planning Acts and the Habitats Regulations 2011 require that the impacts on Natura 2000 sites from the plan or project in question are assessed and that they are assessed in combination with other plans and projects that could affect the same Natura 2000 sites.

The Appropriate Assessment Screening Process identified other plans and projects that could act in combination with the proposed public realm developments at Lucan Demesne to pose likely significant effects on European sites within the study area and its environs.

Planning applications received within the last five years that have been submitted in the past five years (2018-2023) within 500m of the site are summarised below in **Table 2.3**.

Table 2.3 Planning applications submitted in the last five years within 500m of the site.

Planning Ref.	Description	Decision
SD15A/0392	New customer order point with canopy to the existing drive thru lane.	Grant Permission
SD218/0012	Development of 2 car parks on the R835 entering Lucan including: Site A: 7 on-street parking spaces; parallel parking spaces of 2.5x6m dimensions; buffer of 1.2m; Removal and	Part 8 Approved by SDCC 10/12/2024

Planning Ref.	Description	Decision
	relocation of existing low level wall; Removal and replacement all existing trees; Removal and replacement of existing low level hedge; Planting of additional trees along low level wall; Removal and relocation of existing gate; Removal and relocation of existing bus stop; Removal and relocation of existing road traffic signage; Removal and relocation of existing tourism signage; All associated landscape, planting and surface renewal works; All ancillary works. Site B: 10 off-street parking spaces to include1 Wheelchair Accessible parking space and elderly parking spaces; Construction of permeable paving; Construction of low-level wall at roadside perimeter of carpark; Planting of additional trees/shrubs in car park; Construction of gate to carpark; Provision of bicycle parking facilities; Removal and relocation of existing road traffic signage; Removal and relocation of existing tourism signage; All associated landscape, planting	
SD18B/0225	Single storey extension to side, new window to side gable at first floor level, replacement of front door screen with window, new entrance door and window to side of house, removal of porch roof to front of house, removal of window at first floor level to rear of house, alterations to first floor bedroom window to rear and new boundary wall and side gate to side of house.	SDCC Grant 27 Aug 2018
SD16A/0144	Demolition of existing structures on site and the construction of 5 residential dwellings (total gross floor area c. 654.4sq.m) consisting of: (i) five 3 bed, three storey houses ranging between c.125sq.m and c.135sq.m, (ii) 5 off-street car parking spaces, (iii) landscaping boundary treatment and all associated site development works and site services.	ABP Grant 16 February 2016
SD20B/0050	Single storey extension to the side/rear of the existing house; reinstatement of previously built-up window at ground floor level; conversion of existing ground floor kitchen to bathroom and associated site works.	
SD22B/0522	Demolition of existing sunroom to rear to make provision for new sunroom conversion of existing garage to a new Bedroom, new entrance porch, minor alterations to both ground and first floor external wall insulation to existing house and all associated site works	SDCC Grant 27 March 2023
SD17A/0415	Single storey infill motor showroom extension (70sq.m), located between existing motor showroom building and existing service workshop building, form new opens for glazed screens to front and side of existing building, new single storey office extension (35sq.m) to rear of existing motor showroom, provision of new gate and railings at entrance to existing side compound.	SDCC Grant 24 Jan 2018
SD20A/0310	Internal alterations only which are: at level 2 (ground floor), change existing stairs into storage room and new open reception area change existing reception area into an enclosed office, change 2 existing offices into 2 new bedrooms, provide a nurses station in the physio room and change the existing nurses station into a bedroom. At level 3 (first floor plan) change the existing stairs into a hoist and	SDCC Grant 01 Feb 2021

Planning Ref.	Description	Decision
	wheelchair storage room, change an existing 4 bedroom unit into 2 new 2-bed units, change an existing nurses station into a bedroom, change an existing wheelchair storage room into a bedroom. There are no changes proposed to the exterior of the building.	
SD22B/0522	Demolition of existing sunroom to rear to make provision for new sunroom conversion of existing garage to a new Bedroom, new entrance porch, minor alterations to both ground and first floor external wall insulation to existing house and all associated site works.	SDCC Grant 15 Feb 2023
SD22B/0129	Single storey extension to side & rear of existing dwelling and all associated site works.	SDCC Grant 30 Jun 2022
SD19B/0175	Demolish detached store shed to rear; removal of disability ramps up to front door; relocate front entrance from front side to front left side with new pitched over front to replace flat; a lined feature roof over entrance; single storey rear extension; windows and door on side elevation on both ground and first floor levels; alteration to rear first floor windows to accommodate the peak of new rear extension roof; various internal alteration on ground and first floor levels.	SDCC Grant 24 Jun 2019
SD23B/0265	The development will consist of the construction of a single-storey extension to the front of the property and all associated site works.	SDCC Grant 19 Sep 2023
SD21B/0064	Alterations to existing dwelling to include demolition of existing single storey garage; single storey rear extension and garden shed; removal of first floor dormer and chimney; new external insulation ; new windows and roof windows; new dormer to the west; construction of new two storey extension to the east and a single storey extension to the rear of the site; overall increase of the floor area will be 86.55sq.m; all associated site works.	SDCC Grant 14 Dec 2021
SD18A/0310	Construction of a 25 unit residential housing development on a site extending to 0.96 hectares to the north of the N4 Lucan by-pass and to the east (end of) Ardeevin Avenue, consisting of the following: 1 detached, two and a half storey 5 bedroom house (Type 1, 295sq.m); 1 detached, two and half storey 5 bedroom house (Type 1a, 270sq.m); 1 detached, two and a half storey 4 bedroom house (Type 1b, 270sq.m); 1 detached, two and a half storey 5 bedroom house (Type 1c, 280sq.m); 1 detached, two and a half storey 5 bedroom house (Type 1d, 270sq.m); 8 detached, two and a half storey houses (Type 2, 150sq.m each); a two storey, semi-detached block consisting of: 1 two bedroom house (Type 3, 70sq.m); 1 two bedroom house (Type 3a, 74sq.m), 10 semi-detached two and a half storey houses (Type 4, 150sq.m each); all associated site development works including landscaping works, public lighting, ground works, (reduction of existing site level), boundary treatment, roads, footpaths, foul drainage, surface water drainage including attenuation, water main and site entrance piers (with no gates).	ABP Grant 27 October 2019
SD18B/0299	Single and two storey rear extension, internal alterations all	SDCC

Planning Ref.	Description	Decision
	with associated elevation changes and siteworks.	Grant 09 October 2018
SD19A/0165	Detached two storey, two bedroom house in the side garden; 2 site entrances; demolition of garage; all associated site works.	SDCC Grant 09 July 2019

All of these plans and/or projects have been screened for Appropriate Assessment or undergone an Appropriate Assessment themselves and it is therefore assumed that if a plan has been adopted or a project given planning permission following an AA that it cannot pose likely significant adverse effects on a Natura 2000 site.

In addition the proposed development at Lucan Demesne, in combination or cumulatively with the above plans and projects, is not likely to have a significant effect on any of the Natura 2000 sites identified.

SECTION 5 CONCLUSION

This screening report has evaluated the proposed development of a new public realm development at Lucan Demesne, Lucan, Co. Dublin, to determine whether or not significant negative impacts on Natura 2000 sites are likely to arise by virtue of its construction and use.

The River Liffey is the only ecological link (source-pathway-receptors) between the lands at Lucan Demesne and any Natura 2000 site as this watercourse links the lands to the Dublin Bay sites. The Natura 2000 sites in Dublin Bay, which lie within the potential zone of influence of the proposed development are:

- North Dublin Bay SAC (000206)
- South Dublin Bay SAC (000210)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- North Bull Island SPA (004006)

These European Sites are deemed not to be at risk of likely significant effects from construction or operation of the proposed development for the following reasons:

- None of the species, which form part of the Conservation Interest for which the Dublin Bay European Sites located downstream have been designated are considered likely to utilise the habitats within the subject lands;
- There is a significant distance over the surface water network between the proposed development and the Dublin Bay European Sites downstream (>20km);
- Best practice site management will ensure that the works do not have any significant effect on any European site by ensuring that silt laden waters do not reach the river.

Three other European Sites were identified within the likely zone of influence of the development (a 15km radius). These are all Special Areas of Conservation (SACs) as follows:

- 001398 Rye Water Valley/Carton SAC
- 001209 Glenasmole Valley SAC
- 002122 Wicklow Mountains SAC

These European Sites are deemed not to be at risk of likely significant effects from construction or operation of the proposed development for the following reasons:

- None of the species, which form part of the Conservation Interest for which these European Sites have been designated are considered likely to utilise the habitats within the subject lands;
- Although the River Liffey forms a Source-Pathway-Receptor Link between the proposed development and these European Sites, they are all located upstream of Lucan Demesne, so likely significant effects are reduced.
- Or, there is no direct or in-direct Source-Pathway-Receptor link between the European Site and the proposed development.

The Appropriate Assessment procedure for this proposed Plan is therefore concluded at this Screening Stage and it is the opinion of this author that a detailed (Stage 2) Appropriate Assessment is not required.