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# SOUTH DUBLIN INTEGRATED CONSTRUCTED WETLANDS

(DURL PROJECT # LIFE17 ENV/IE/000281)

# GRIFFEEN VALLEY PARK - Ecological Baseline Report

September 2020

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Comhairle Contae Átha Cliath Theas
South Dublin County Council

Life

# South Dublin Integrated Constructed Wetlands
**(DURL PROJECT # LIFE17 ENV/IE/000281)**

# GRIFFEEN VALLEY PARK
# Ecological Baseline Report

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# EXECUTIVE SUMMARY

Roughan & O'Donovan (ROD) was appointed by South Dublin County Council (SDCC) to undertake ecological surveys of four proposed Integrated Constructed Wetland (ICW) sites in three urban park locations in south County Dublin as part of the Dublin Urban Rivers LIFE Project (DURL) to address the issue of pollution in urban rivers.

The DURL Project (Agreement number: LIFE17 ENV/IE/000281) has received funding from the Union.

SDCC are proposing to construct four ICWs in Dodder Valley Park, Griffeen Valley Park and an amenity area in Kilnamanagh, and this report provides information on the baseline ecological conditions at the ICW location within **Griffeen Valley Park**, and proposes some recommendations for the protection and enhancement of the biodiversity at the ICW site.

The information from this report will inform the Part 8 planning application process and the Environmental Impact Assessment/"Article 120" Screening (EIA) and Appropriate Assessment (AA) Screening Reports for each of the proposed ICW developments.

The ecological surveys of ICW sites were undertaken in June and July 2020 and the survey methodology was based on the TII/NRA *Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes* (TII/NRA, 2009) and the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* Version 1.1 (CIEEM,2019).

The ecological surveys were designed to provide information on the habitats (classified to Fossitt Level 3), breeding and aquatic birds, bats, invasive species, large mammals (especially badgers and otters), key invertebrate species and amphibian habitat suitability within a 150 m buffer zone of the ICW location.

One ICW will be constructed in Griffeen Valley Park on the western side of the Griffeen River. The location of the ICW is entirely covered by amenity grassland, which is considered to be of low ecological value. It is located adjacent to mixed broadleaved woodland growing along the Griffeen River, but this is outside the footprint of the ICW.

No sensitive or protected species were found within the footprint of the ICW.

# 1. INTRODUCTION

## 1.1 Background

Roughan & O'Donovan (ROD) was appointed by South Dublin County Council (SDCC) to undertake ecological surveys of four proposed Integrated Constructed Wetland (ICW) sites.

The creation of integrated constructed wetlands at three strategic locations in South Dublin County is a key action of the Dublin Urban Rivers LIFE Project (DURL Project Agreement number: LIFE17 ENV/IE/000281). The Dublin Urban Rivers Life (DURL) Project is a collaboration between South Dublin County Council and Dún Laoghaire-Rathdown County Council. The DURL Project aims to address the issue of pollution in urban rivers using techniques with proven results relating to domestic misconnection sources and Integrated Constructed Wetland (ICW) development and which will ultimately improve water quality in South Dublin County.

ICWs are natural water retention measures which will improve the quality of receiving river water, provide flood alleviation, bioretention of particulates and nutrients, improve habitat conditions and biodiversity, and promote the relationship between green infrastructure and public wellbeing. The project will also develop a decision-support tool for water managers, planners, project developers and policymakers to use when deciding on river water quality improvement options in urban areas.

The ICW sites surveyed in this report are situated at the following locations (see Appendix A for site locations):

- Dodder Valley Park – two ICWs
- **Griffeen Valley Park – one ICW**
- Kilnamanagh – one ICW

This report provides the baseline ecological conditions at the ICW location within the **Griffeen Valley Park** and will inform the Part 8 planning application process and the Environmental Impact Assessment/"Article 120" Screening (EIA) and Appropriate Assessment (AA) Screening Reports for each of the proposed ICW developments. The report also proposes some recommendations for the protection and enhancement of the biodiversity at each ICW site.

The ecological surveys and reporting for this report were carried out by Michael Bailey MSc BSc (Hons) MCIEEM, Owen O'Keefe BSc (Hons) MCIEEM, Kate Moore BSc (Hons) GradCIEEM and Kalvin Townsend-Smyth BSc (Hons) GradCIEEM. All ROD ecologists are members of the Chartered Institute of Ecology & Environmental Management (CIEEM).

# 2. ESTABLISHING THE BASELINE

This section describes the methodologies followed in undertaking the field surveys and in the compilation of this report.

## 2.1 Establishing the Study Area

This is informed by the findings of desk study (presence/absence of protected habitats, flora or fauna within the receiving environment) and relevant best practice methodology for assessing impacts on those ecological features. The study area in this case included a 150 m buffer around the perimeter of the proposed ICW site.

## 2.2 Desk Study

A desktop study was carried out to collate information on the ecology of the study area. Information on species listed on Annex II and V to the Habitats Directive; the Wildlife Act; the Flora (Protection) Order; Annex I to the Birds Directive; and, the Third Schedule to the European Communities (Birds and Natural Habitats) Regulations were sourced from the statutory consultee, the NPWS, and the National Biodiversity Data Centre (NBDC). The NPWS online interactive map-viewer provided information relating to designated sites of conservation importance within or connected to the study area. A spatial query of the study area was undertaken using data provided by NBDC.

The desk study undertaken for this report also included a review of available ecological data including from the following sources:

- Records from the NPWS *Map Viewer*;
- Review of the NBDC *Biodiversity Maps*; and,
- Review of *EPA Maps*.

As with all desk studies, the data considered was only as good as the data supplied by the recorders and recording schemes. The recording schemes provide disclaimers in relation to the quality and quantity of the data they provide, and these were considered when examining outputs of the desk study.

## 2.3 Ecological Survey Methodologies

The ecological surveys of ICW sites were undertaken in June and July 2020.The survey methodology is based on the TII/NRA *Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes* (TII/NRA, 2009) and the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* Version 1.1 (CIEEM,2019). The following sections outline the specific ecological survey methodologies followed.

### 2.3.1 Habitat Surveys

Habitats were identified in accordance with Fossitt (2000). Habitat mapping was undertaken with regard to guidance set out in Smith *et al*. (2011). Habitats were assessed for correspondence to those listed in Annex I of the Habitats Directive during the walkover survey.

### 2.3.2 Protected Mammal Surveys

Summary details of the methodologies utilised in the various detailed protected mammal surveys undertaken are presented below.

#### *2.3.2.1 Otter (Lutra lutra)*

The function of the Otter survey was to identify any sensitive features within the study area potentially of use to breeding, resting, foraging or commuting and to establish presence or absence of Otter activity.

Otter are listed under Annex II and Annex IV of the Habitats Directive and protected under the Wildlife Acts, 1976–2012. Otter is evaluated as being Near Threatened in the most recent Red Data list for mammals (Kingston, 2012). This species is distributed throughout Ireland and can have a home range of up to 10 or 20 km (NPWS, 2013). As per the NPWS Article 17 Reporting, the range, population, habitat and future prospects for this species in Ireland have been assessed as Favourable.

The Otter survey was conducted adhering to best practice guidance (TII, 2008b; 2008c) and involved a search of watercourses for physical evidence of Otter, *e.g*. spraints, prints, slides, trails, couches and holts. TII (2008b; 2008c) does not specify an extent or scope for an Otter survey other than an expectation that the derogation limit of 150 m is sufficiently covered. The survey methodology was cognisant of the recommendations in the Otter Threat Response Plan 2009–2011 (NPWS, 2009), which recognises the importance of the riparian buffer (10 m on both banks) for Otter and these areas were included in the survey corridor.

#### *2.3.2.2 Badger (Meles meles)*

The Badger survey was conducted in order to determine the presence or absence of Badger within the study area. Badgers occur throughout the island of Ireland and are afforded protection under the Wildlife Acts, 1976 to 2012. The proposed development may directly or indirectly impact on Badgers. Construction may result in death or injury to Badgers within setts, as well as the destruction of the setts themselves and the loss of foraging habitat. Construction works close to breeding setts can cause serious disturbance to Badgers and mortality of cubs.

The Badger survey was based on best practice guidance (TII, 2006b; 2008c) and involved a systematic search of all fence lines, woodland and scrub habitats for physical evidence of Badger, *e.g*. setts, latrines, badger paths. The optimal period for Badger surveys is during seasonal peaks in territorial activity and when vegetation cover is at a minimum (February to April, and a less pronounced peak in October). Badger setts were classified as main, annex, subsidiary and outlier, as per the convention set out in TII (2006b) and levels of current usage were noted.

#### *2.3.2.3 Bat Activity Surveys*

Two activity transects were undertaken which involved walking a predetermined route around each of the three locations for 2 hours from sunset with full-spectrum bat detectors. The surveys focused on high quality habitat for foraging bats such as woodland edges and watercourses to maximise the chances of picking up less common species. For safety, two surveyors were on site for each survey. The results of the bat survey were displayed on maps using ArcGIS.

### 2.3.3 Birds Surveys

The breeding bird survey followed the Countryside Bird Survey (CBS) methodology. A predetermined transect route was walked early in the morning at a slow pace, and birds within the surveyor's field of vision and hearing were recorded. The surveyor also used x10 binoculars to aid the identification of birds at distance. All bird species were recorded using standard British Trust for Ornithology (BTO) species codes. Evidence of breeding for each bird species was also collected, noting 'possible', 'probable' and

'confirmed' breeding as outlined in Bird Atlas 2007-11 (BTO, 2011). Two breeding bird surveys were undertaken at each location.

### 2.3.4 Amphibian Habitat Survey

The amphibian habitat suitability assessment took place alongside the habitat survey. All pools, ponds and ditches within 150m of the ICW locations were assessed for their suitability to support breeding common frog and smooth newt. Characteristics such as the presence of aquatic plants, disturbance, pollution and drying out were recorded. Habitat surrounding the ponds was also recorded and used in the overall suitability assessment.

### 2.3.5 Key Invertebrate Survey

A list of invertebrates including butterflies, bees and bumblebees, damselflies, dragonflies etc was recorded during the habitat survey and mammal surveys. These surveys were undertaken in sunny, calm weather only, ideal for flying insects.

### 2.3.6 Invasive Alien Plant Species

During the walkover surveys, the locations of any invasive species was noted and recorded using high-definition GPS. The focus was on identifying species subject to restrictions under Section 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). Target notes were taken of any invasive species identified. Information recorded included the area of infestation, plant condition and height. Site features that could affect control measures such as adjacent land use, structures and services were also recorded.

# 3. GRIFFEEN VALLEY PARK

One ICW is proposed for the western side of the Griffeen River in the centre of the northern half of the park. The location is displayed in Appendix A.

## 3.1 Location

Griffeen Valley Park is an amenity park bounded by residential housing on almost all sides apart from Adamstown Avenue and an active railway track, which run parallel to each other along the southern boundary of the park. The Griffeen River flows in a northerly direction through the park and enters the River Liffey *c.* 1.5 km downstream. A location map is provided in Appendix A.

## 3.2 Desk Study Results

The National Biodiversity Data Centre (NBDC) Database was accessed prior to conducting the surveys. Table 3.1 lists the rare and protected species recorded within the study area. Table 3.2 lists NBDC records of invasive species within the Study Area.

**Table 3.1 NBDC Records within the Study Area**

| Common Name | Scientific Name | Status |
|---|---|---|
| Common Frog | *Rana temporaria* | Annex V, WA |
| Smooth Newt | *Lissotriton vulgaris* | WA |
| Barn Owl | *Tyto alba* | Red, WA |
| Barn Swallow | *Hirundo rustica* | Amber, WA |
| Black Redstart | *Phoenicurus ochruros* | WA |
| Black-billed Magpie | *Pica pica* | WA |
| Blackcap | *Sylvia atricapilla* | WA |
| Black-headed Gull | *Larus ridibundus* | Red, WA |
| Blue Tit | *Cyanistes caeruleus* | WA |
| Bohemian Waxwing | *Bombycilla garrulus* | WA |
| Brambling | *Fringilla montifringilla* | WA |
| Chaffinch | *Fringilla coelebs* | WA |
| Coal Tit | *Periparus ater* | WA |
| Common Blackbird | *Turdus merula* | WA |
| Common Bullfinch | *Pyrrhula pyrrhula* | WA |
| Common Buzzard | *Buteo buteo* | WA |
| Common Chiffchaff | *Phylloscopus collybita* | WA |
| Common Coot | *Fulica atra* | Annex II, III, Amber, WA |
| Common Cuckoo | *Cuculus canorus* | WA |
| Common Grasshopper Warbler | *Locustella naevia* | Amber, WA |
| Common Kestrel | *Falco tinnunculus* | Amber, WA |
| Common Kingfisher | *Alcedo atthis* | Annex I, Amber, WA |
| Common Linnet | *Carduelis cannabina* | Amber, WA |

| Common Name | Scientific Name | Status |
|---|---|---|
| Common Moorhen | *Gallinula chloropus* | WA |
| Common Pheasant | *Phasianus colchicus* | Annex II, III, WA |
| Common Pochard | *Aythya ferina* | Annex II III, Amber, WA |
| Common Raven | *Corvus corax* | WA |
| Common Redshank | *Tringa totanus* | Red, WA |
| Common Snipe | *Gallinago gallinago* | Annex II, III, Amber, WA |
| Common Starling | *Sturnus vulgaris* | Amber, WA |
| Common Swift | *Apus apus* | Amber, WA |
| Common Whitethroat | *Sylvia communis* | WA |
| Common Wood Pigeon | *Columba palumbus* | Annex II, III, WA |
| Corn Crake | *Crex crex* | Annex I, Red, WA |
| Eurasian Collared Dove | *Streptopelia decaocto* | WA |
| Eurasian Curlew | *Numenius arquata* | Annex II, Red, WA |
| Eurasian Jackdaw | *Corvus monedula* | WA |
| Eurasian Jay | *Garrulus glandarius* | WA |
| Eurasian Oystercatcher | *Haematopus ostralegus* | Amber, WA |
| Eurasian Siskin | *Carduelis spinus* | WA |
| Eurasian Sparrowhawk | *Accipiter nisus* | WA |
| Eurasian Teal | *Anas crecca* | Annex II, III, Amber, WA |
| Eurasian Tree Sparrow | *Passer montanus* | Amber, WA |
| Eurasian Treecreeper | *Certhia familiaris* | WA |
| Eurasian Wigeon | *Anas penelope* | Annex II, III, Amber, WA |
| Eurasian Woodcock | *Scolopax rusticola* | Annex II, III, Amber, WA |
| European Golden Plover | *Pluvialis apricaria* | Annex I, II, III, Red, WA |
| European Goldfinch | *Carduelis carduelis* | WA |
| European Greenfinch | *Carduelis chloris* | WA |
| European Robin | *Erithacus rubecula* | WA |
| Fieldfare | *Turdus pilaris* | WA |
| Gadwall | *Anas strepera* | Annex II, Amber, WA |
| Goldcrest | *Regulus regulus* | WA |
| Goosander | *Mergus merganser* | Annex II, Amber, WA |
| Great Black-backed Gull | *Larus marinus* | Amber, WA |
| Great Cormorant | *Phalacrocorax carbo* | Amber, WA |
| Great Crested Grebe | *Podiceps cristatus* | Amber, WA |
| Great Spotted Woodpecker | *Dendrocopos major* | WA |
| Great Tit | *Parus major* | WA |

| Common Name | Scientific Name | Status |
|---|---|---|
| Grey Heron | *Ardea cinerea* | WA |
| Grey Partridge | *Perdix perdix* | Annex II, III, Red, WA |
| Grey Wagtail | *Motacilla cinerea* | WA |
| Hedge Accentor | *Prunella modularis* | WA |
| Herring Gull | *Larus argentatus* | Red, WA |
| Hooded Crow | *Corvus cornix* | WA |
| House Martin | *Delichon urbicum* | Amber, WA |
| House Sparrow | *Passer domesticus* | Amber, WA |
| Iceland Gull | *Larus glaucoides* | WA |
| Lesser Black-backed Gull | *Larus fuscus* | Amber, WA |
| Lesser Redpoll | *Carduelis cabaret* | WA |
| Little Egret | *Egretta garzetta* | Annex I, WA |
| Little Grebe | *Tachybaptus ruficollis* | Amber, WA |
| Long-eared Owl | *Asio otus* | WA |
| Long-tailed Tit | *Aegithalos caudatus* | WA |
| Mallard | *Anas platyrhynchos* | Annex II, III, WA |
| Meadow Pipit | *Anthus pratensis* | WA |
| Merlin | *Falco columbarius* | Annex I, Amber, WA |
| Mew Gull | *Larus canus* | Amber, WA |
| Mistle Thrush | *Turdus viscivorus* | WA |
| Mute Swan | *Cygnus olor* | Amber, WA |
| Northern Lapwing | *Vanellus vanellus* | Annex II, Red, WA |
| Northern Pintail | *Anas acuta* | Annex II, III, Red, WA |
| Peregrine Falcon | *Falco peregrinus* | Annex I, WA |
| Red Grouse | *Lagopus lagopus* | Annex II, III, Red, WA |
| Redwing | *Turdus iliacus* | WA |
| Reed Bunting | *Emberiza schoeniclus* | WA |
| Rock Pigeon | *Columba livia* | Annex II, WA |
| Rook | *Corvus frugilegus* | WA |
| Sand Martin | *Riparia riparia* | Amber, WA |
| Sedge Warbler | *Acrocephalus schoenobaenus* | WA |
| Skylark | *Alauda arvensis* | Amber, WA |
| Song Thrush | *Turdus philomelos* | WA |
| Spotted Flycatcher | *Muscicapa striata* | Amber, WA |
| Stock Pigeon | *Columba oenas* | Amber, WA |
| Stonechat | *Saxicola torquata* | WA |

| Common Name | Scientific Name | Status |
|---|---|---|
| Tufted Duck | *Aythya fuligula* | Annex II, III, Amber, WA |
| White Wagtail | *Motacilla alba* | WA |
| White-throated Dipper | *Cinclus cinclus* | WA |
| Whooper Swan | *Cygnus cygnus* | Annex I, Amber, WA |
| Willow Warbler | *Phylloscopus trochilus* | WA |
| Winter Wren | *Troglodytes troglodytes* | WA |
| Yellowhammer | *Emberiza citrinella* | Red, WA |
| Marsh Fritillary | *Euphydryas aurinia* | Annex II |
| Ribbonwort | *Pallavicinia lyellii* | FPO |
| Desmoulin's Whorl Snail | *Vertigo moulinsiana* | Annex II, WA |
| Many-seasoned Thread-moss | *Bryum intermedium* | FPO |
| Red Deer | *Cervus elaphus* | WA |

*Status (listing conferring protection or describing conservation status) abbreviations: Annex II/IV/V (non-avian species) = Habitats Directive (HD); Annex I, II, III = Birds Directive (BD); WA = Wildlife Acts; FPO = Floral Protection Order and Red/Amber/Green = Birds of Conservation Concern in Ireland, 2014 to 2019 (BOCCI). All bird species in Ireland are protected under the Wildlife Acts 1976 to 2012.*

**Table 3.2 Invasive Species Recorded within the Study Area**

| Common Name | Scientific Name |
|---|---|
| Common Garden Snail | *Cornu aspersum* |
| Keeled Slug | *Tandonia sowerbyi* |
| Wrinkled Snail | *Candidula intersecta* |
| Sika Deer | *Cervus nippon* |

## 3.3 Habitats

The following section describes the habitats recorded within the study area. A total of nine habitats, including one mosaic (area characterised by a mixture of two or more habitat types), were recorded within the study area (see Table 3.3). A habitat map is provided in Appendix B.

**Table 3.3 Habitats recoded within the study area**

| Habitat | Fossitt Code |
|---|---|
| Amenity Grassland | GA2 |
| Dry Meadows and Grassy Verges | GS2 |
| Depositing/ Lowland River | FW2 |
| Mixed Broadleaved Woodland | WD1 |
| Scattered Trees and Parkland | WD5 |
| Hedgerows | WL1 |
| Treelines | WL2 |
| Buildings and Artificial Surfaces | BL3 |

| Habitat | Fossitt Code |
|---|---|
| Buildings and Artificial Surfaces/ Amenity Grassland | BL3/GA2 |

*Amenity Grassland (GA2)*

This type of grassland is improved, or species-poor, and is managed for purposes other than grass production. Amenity grassland was common throughout study area. This habitat was actively managed and was characterised by a low sward height and low species diversity (Plate 3.1).

**Plate 3.1 Amenity Grassland (GA2) which covers a majority of the Griffeen Valley Park**

*Dry Meadows and Grassy Verges (GS2)*

This grassland type is was associated with the river embankments. This habitat has been left uncut. Some species recorded within the grassland include Meadowsweet, Lady's Bedstraw, Wild Angelica, Willowherb, Sowthistle, Creeping Thistle and Spear Thistle (See Plate 3.2 for an example of this habitat type in Griffeen Valley Park).

*Depositing/ Lowland River (FW2)*

This category includes watercourses, or sections of these, where fine sediments are deposited on the riverbed. This habitat was represented within the study area by the Griffeen River which runs in a northerly direction through the centre of the park. Due to the presence of Otter and Heron along this stretch, it is expected that this river

supports some species of fish. Grassy verges bound the eastern side of the river, and woodlands with some overhanging trees run along the western side of the river (See Plate 3.2 for an example of this habitat type in Griffeen Valley Park).

**Plate 3.2 Typical habitats within Griffeen Valley Park including the Griffeen River (FW2), with associated dry meadows and grassy verges (GS2).**

*Mixed Broadleaved Woodland (WD1)*

This general category includes woodland areas with 75-100% cover of broadleaved trees, and 0-25% cover of conifers. It should be used in situations where woodland stands cannot be classified as semi-natural. Trees may include native and non-native species.

*Scattered Trees and Parkland (WD5)*

This category can be used in situations where scattered trees, standing alone or in small clusters, cover less than 30% of the total area under consideration but are a prominent structural or visual feature of the habitat. This usually occurs in areas of cultivated grassland, particularly amenity areas. This habitat has been created for amenity use within the park and is present along the eastern side of the river on the southern half of the study area and in pockets along the edge of residential housing to the west.

*Hedgerows (WL1)*

Hedgerows are linear strips of shrubs, often with occasional trees, that typically form field or property boundaries. Hedgerows were recorded surrounding the dog park to the south of the study area. Species recorded within the habitat included Hawthorn (*Alnus glutinosa*) and Elder (*Acer pseudoplatanus*).

*Treelines (WL2)*

Treelines were recorded within the study area along the edge of the residential housing the east and dividing the amenity grassland to the west. Species recorded within the

habitat included Horse Chestnut (*Aesculus hippocastanum*) and Sycamore (*Acer pseudoplatanus*).

*Buildings and Artificial Surfaces (BL3)*

The roads, footpaths and buildings within the study area fall under this category. Generally built habitats are not considered of ecological significance.

*Buildings and Artificial Surfaces/ Amenity Grassland (BL3/GA2)*

This habitat is used to represent private dwellings with gardens. This habitat mosaic is not considered of high biodiversity value.

## 3.4 Birds

The following section describes the bird species that were recorded within the study area. A total of 28 birds, including 9 amber listed species and 2 red listed species.

### 3.4.1 Breeding Birds

Two breeding bird surveys were carried out on the 24th and 30th June 2020 to record the species that were using the area to breed. The activity and behaviour of the birds was also recorded and used to assess the likelihood of these individuals to be breeding within the site. Based on these findings, the species were divided between four groups based on their likelihood to be breeding within the area. It was determined that 7 species were confirmed to be breeding within the site, 4 of which are amber listed, 6 were probable, 6 were possible including one red listed species and 8 were non-breeding, including 5 amber listed species and 1 red listed species. See Table 3.4 for details on the species and their breeding potential which were recorded during the breeding bird surveys.

**Table 3.4 Breeding Bird Survey Results**

| Common Name | Species Name | Breeding Status |
|---|---|---|
| Blue Tit | *Cyanistes caeruleus* | Confirmed breeding |
| House Sparrow | *Passer domesticus* | |
| Linnet | *Linaria cannabina* | |
| Robin | *Erithacus rubecula* | |
| Starling | *Sturnus vulgaris* | |
| Wood Pigeon | *Columba palumbus* | |
| Wren | *Troglodytes troglodytes* | |
| Blackbird | *Turdus merula* | Probable breeding |
| Blackcap | *Sylvia atricapilla* | |
| Chaffinch | *Fringilla coelebs* | |
| Goldfinch | *Carduelis carduelis* | |
| Hooded Crow | *Corvus cornix* | |
| Magpie | *Pica pica* | |
| Coal Tit | *Periparus ater* | Possible breeder |
| Collard Dove | *Streptopelia decaocto* | |
| Great Tit | *Parus major* | |

| | | |
|---|---|---|
| Grey Wagtail | *Motacilla cinerea* | |
| Song Thrush | *Turdus philomelos* | |
| Treecreeper | *Certhia familiaris* | |
| Common Gull | *Larus canus* | Non-breeding |
| Herring Gull | *Larus argentatus* | |
| House Martin | *Delichon urbicum* | |
| Jackdaw | *Corvus monedula* | |
| Lesser Black-backed Gull | *Larus fuscus* | |
| Rook | *Corvus frugilegus* | |
| Sparrowhawk | *Accipiter nisus* | |
| Swallow | *Hirundo rustica* | |

### 3.4.2 Aquatic Birds

Grey Wagtail (*Motacilla cinerea*) and Grey Heron (*Ardea cinerea*) was recorded along Griffeen River during the survey. Birds species associated with the riverine habitat are especially sensitive to disturbance from construction activities.

## 3.5 Mammals

### 3.5.1 Bats

Bat activity surveys were undertaken on the 25th June and 9th July June 2020 in suitable weather conditions. Four bat species were recorded during the surveys, Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Leisler's bat (*Nyctalus leisleri*) and Daubenton's Bat (*Myotis daubentonii*). Bats were seen commuting and foraging along treelines and hedgerows, and within the open spaces above the amenity grasslands. Table 3.5 below shows the number of calls recorded for each species over both surveys.

**Table 3.5 Bat Survey Results**

| Common Name | Species Name | Number of Calls Recorded |
|---|---|---|
| Leisler's Bat | *Nyctalus leisleri* | 67 |
| Common Pipistrelle | *Pipistrellus pipistrellus* | 48 |
| Soprano Pipistrelle | *Pipistrellus pygmaeus* | 23 |
| Daubenton's Bat | *Myotis daubentonii* | 2 |

### 3.5.2 Badger

No evidence or signs of badger or their resting places were found during the field survey. Any potential badger habitat observed within the study area was considered to have low suitability for badgers.

### 3.5.3 Otter

There were two Otter spraints observed on rocks within the river, less than 100 m upstream of the study area (Plate 3.2). Considering the close proximity of the spraints to the study area, it can be assumed that Otter are present and use the stretch of the river within the study area. See Table 3.6 for the coordinates of the spraint locations.

**Plate 3.2** **Otter spriant (red circle) in rock in Griffeen River upstream from ICW site.**

**Table 3.6 Otter Sprain Locations**

| Feature | GPS Coordinates |
|---|---|
| Otter Spraint 1 | 0703839 0733472 |
| Otter Spraint 2 | 0703807 0733438 |

## 3.6 Invertebrates

A number of key invertebrate species were recorded during the survey (See Table 3.7). Bumblebees and butterflies were associated with the grassland habitats within the park.

**Table 3.7 Key invertebrate species recorded during walkover survey.**

| Common Name | Scientific Name |
|---|---|
| **Bees** | |
| White-tailed Bumblebee | *Bombus locurum agg.* |
| Garden Bumblebee | *Bombus hortorum* |
| **Butterflies** | |
| Speckled Wood | *Pararge aegeria* |

## 3.7 Amphibians

No evidence of Common Frog (*Rana temporaria*) or Smooth Newt (*Lissotriton vulgaris*) was recorded at the park. The riparian habitat along the Griffeen River could support amphibians.

## 3.8 Invasive Species

There were no invasive species which are subject to restrictions as listed on the Third Schedule of the Birds and Natural Habitats Regulations recorded within the study area.

However, Snowberry (*Symphoricarpos albus*) is an invasive plant species not subject to restrictions and was recorded during the field survey and it poses a threat to native biodiversity in the area.

## 3.9 Recommendations

### 3.9.1 Wetland Construction

The construction of the ICW should be carried out with regard to guidance set out in the *Guidance on good practice in the management and creation of small waterbodies in Scotland* (SEPA, 2000) in order to maximise their biodiversity potential. If fencing is required, it should include gaps to allow amphibians and small mammals to get in. Consideration should be given to the creation of terrestrial refugia next to the constructed wetlands which may consist of either log piles or clean inert material covered with topsoil.

### 3.9.2 Protection of Mammals

*Otter*

It is likely that Otter commute along the Griffeen River within the park. To reduce the impacts on Otter, the following measures should be included in any future Construction Management Plan:

- Any excavations greater than 1 m deep should be securely covered at night or a ramp provided to enable animals to escape should they fall in.
- Similarly, any temporarily exposed open pipe system will be capped to prevent Otter from gaining access when contractors are off site.
- Usage of artificial lighting during the construction phase will be limited to the works areas.

*Bats*

Bats were recorded foraging along the within the study area.

- During the construction phase the use of artificial lighting will be limited to the works area. Light spill outside this area will be prevented, as much as possible.

### 3.9.3 Natural Colonisation

The creation of the ICW will involve the loss of areas of rough grassland. Existing grassland outside these sites should be retained. Areas of bare ground should be allowed to re-seed naturally throughout the site, and no commercial/new seed mixes should be utilised.

### 3.9.4 Vegetation Removal

The protection of bird breeding habitats during the nesting season (1st March to 31st August, inclusive), are set out in the Wildlife Act. Any removal of vegetation within this period will require the supervision of a suitably qualified and experienced ecologist to ensure that no nesting birds are present.

### 3.9.5 Landscaping

Planting should consist of locally sourced native species only. Planting should be undertaken in accordance with the Pollinator Friendly Planting Code in the All Ireland Pollinator Plan 2015-2020. If soil/substrate needs to be imported to the site for the purposes of development, the Contractor should ensure that the imported soil/substrate is free from invasive species.

## 3.10 Summary of Ecological Assessment

This ICW location is dominated by improved grasslands and/or managed habitat features which can be classified as being of low ecological value. There were no species listed in the FPO, nor any invasive species or rare/protected faunal species found within the footprint of this proposed ICW site.

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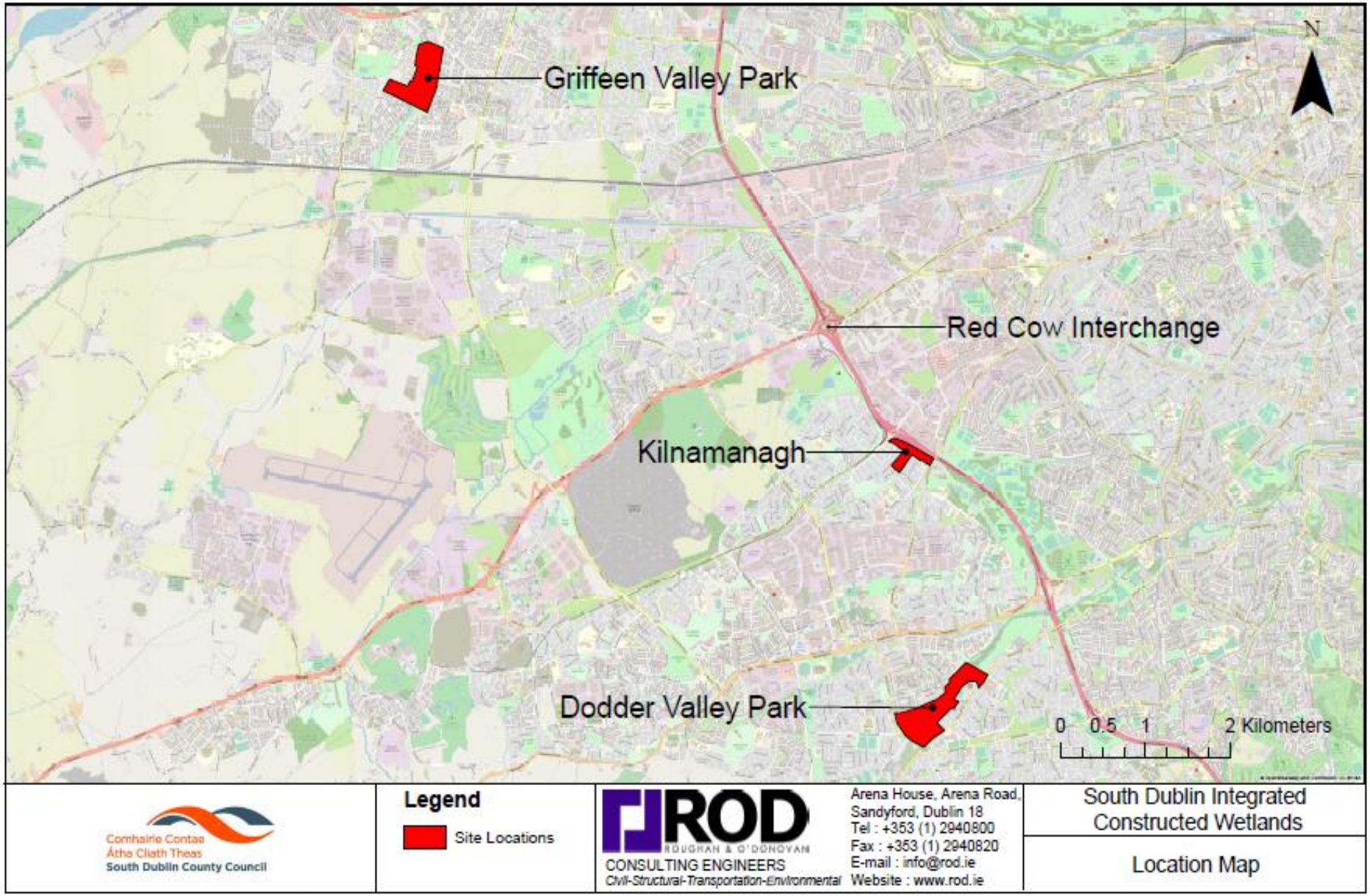
# APPENDIX A

# LOCATION MAP


Griffeen Valley Park
Red Cow Interchange
Kilnamanagh
Dodder Valley Park
N
0 0.5 1 2 Kilometers
Comhairle Contae Átha Cliath Theas
South Dublin County Council
Legend
Site Locations
ROD
ROUGHAN & O'DONOVAN
CONSULTING ENGINEERS
Civil-Structural-Transportation-Environmental
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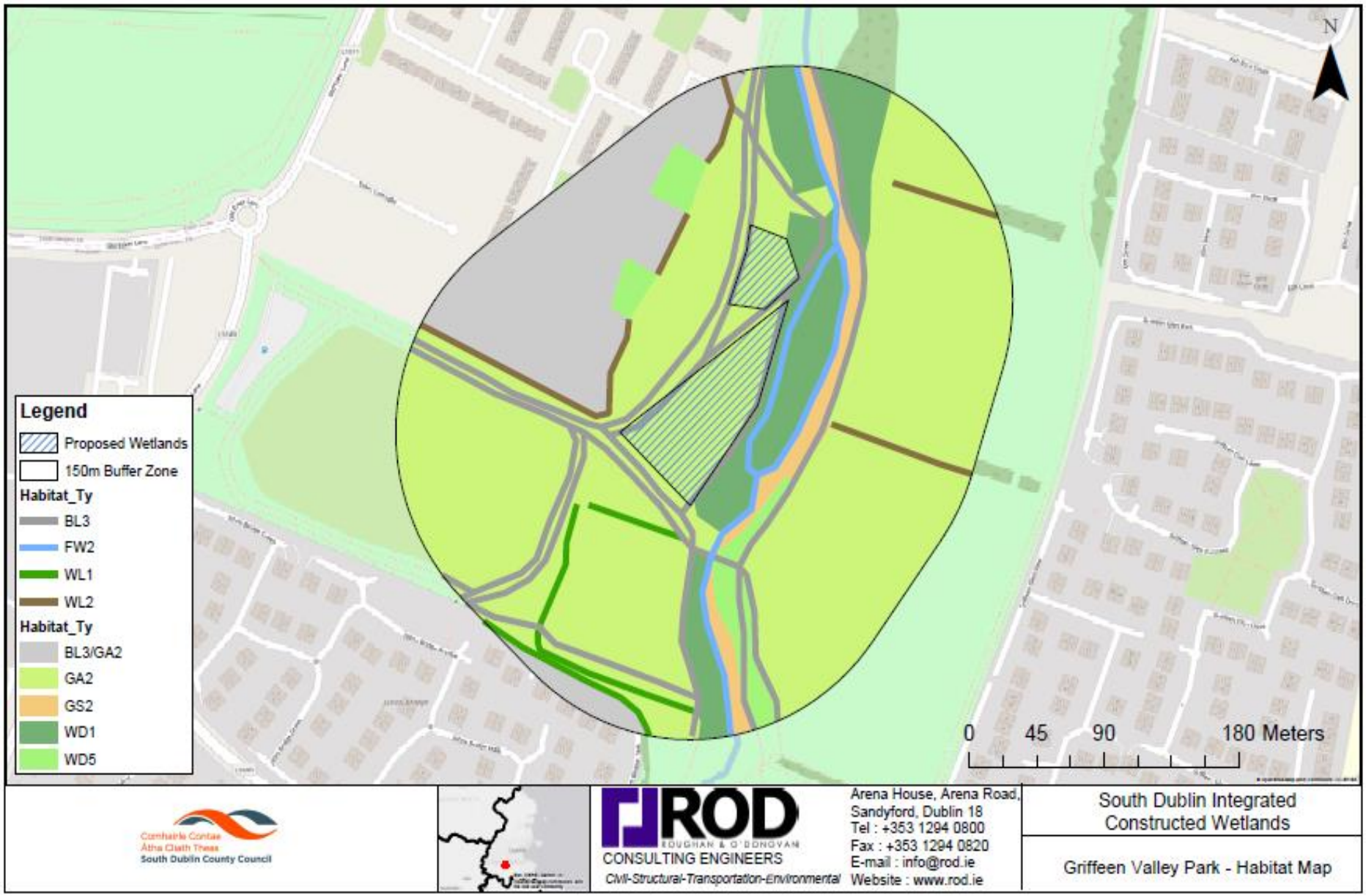
Fax : +353 (1) 2940820
E-mail : info@rod.ie
Website : www.rod.ie
South Dublin Integrated Constructed Wetlands
Location Map

# APPENDIX B

# GRIFFEEN VALLEY PARK HABITAT MAP


N
Legend
Proposed Wetlands
150m Buffer Zone
Habitat_Ty
BL3
FW2
WL1
WL2
Habitat_Ty
BL3/GA2
GA2
GS2
WD1
WD5
0
45
90
180 Meters
Comhairle Contae Átha Cliath Theas
South Dublin County Council
ROD
ROUGHAN & O'DONOVAN
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South Dublin Integrated Constructed Wetlands
Griffeen Valley Park - Habitat Map