County Wexford
Wetland Survey 2022




Report prepared for Wexford County Council

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An Action of the County Wexford Biodiversity Action Plan 2013-2018

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Main image: Castletalbot Lake; Centre row L to R: Salicornia beds at Tacumshin; Rosslare marsh; Swans at Tacumshin and River Slaney, Co. Wexford (Photo: P. Foss, Castle Talbot Lake and Nature Walk & Google Street View).

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County Wexford Wetland Survey 2022

This partnership project created a digital GIS wetland map and Site database of known and potential wetland sites in County Wexford. The wetland habitats recorded include lakes, ponds, watercourses, springs, swamps, wet grassland, marsh, bogs, fens, bog woodland, riparian woodland, wet woodland and coastal habitats. In all, 38 wetland habitat types were researched and mapped.

The 2022 project involved two main elements:

- *a desktop literature review aimed at identifying all previously reported wetlands in County Wexford and gather background data on those sites identified; and*
- *a desktop analysis of aerial photography and other GIS datasets to identify and compile a map of potential wetlands which had not been previously reported.*

The resulting data-set from the project provides a useful tool for future heritage conservation planning in the county, will assist in the development of sustainable planning programmes, and will allow for the design of future targeted wetland surveys and research programmes in County Wexford.

An Action of the County Wexford Biodiversity Action Plan 2013-2018

Acknowledgements

The County Wexford Wetland Survey 2022 (WXWS 2022) project was a joint project initiative of the Heritage Office of Wexford County Council and Wetland Surveys Ireland.

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- National Parks & Wildlife Service;
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Executive Summary

1. County Wexford is known to contain a wide variety of coastal and inland wetlands, which support many flora and fauna species of high conservation concern. Due to the varying topography, geology, hydrology, climate, and soils present, Wexford has wetland habitats ranging from fens, marshes, rivers and associated floodplains, lakes, springs, wet woodlands, and coastal habitats including lagoons, saline lakes, estuaries, salt marsh and dune slacks.

2. The aim of the County Wexford Wetland Survey 2022 (WXWS 2022) was to prepare a database of all freshwater and coastal wetland sites in the county. The project involved two distinct elements:

    - a desktop literature review to identify all known wetlands in County Wexford and gather background data on these sites; and

    - an analysis of aerial photography and other GIS datasets to identify and map potential wetlands which had not been previously reported.

3. The current study focused on the identification of 38 wetland habitat types (26 of which may correspond with habitats listed on Annex I of the EU Habitats Directive) in County Wexford.

4. The information gathered during the study is stored in a ***Site database*** and associated ***GIS dataset***, the WXWS (Wexford Wetland Survey). Together these datasets form, for the first time, a preliminary inventory of the wetland resource in the county. This resource should prove useful for, amongst other things, the future spatial planning in the county.

5. A variety of data sources (reports, publications, databases and inventory lists, and local interest groups) were consulted during the project (see Appendix 1).

6. Information on 367 potential wetland sites and sub-sites held in the *WXWS Site database* and mapped in the *WXWS GIS dataset.* These sites were identified during a literature review of the county and during the GIS analysis of aerial photography and other datasets.

7. The sub-soils map of Ireland was used as a primary source in identifying areas of potential wetland within the county. Based on analysis of the sub-soil types that indicate wetland areas, the total area of wetland within Wexford is estimated to cover 15,344ha or 6.48% of the county. While an indication of the original extent of wetlands, this calculation is certainly an over estimate as it does not take account of changes due to land management or drainage.

8. Preliminary site boundaries have been mapped for main wetland sites identified during the WXWS 2022 which occur outside of designated areas, providing an estimate of the extent of wetlands within the county. Sub-sites occur within the main site areas. The area of wetland sites mapped in Wexford covered an area of 2,540ha (1.07% of land area). A further 13,349ha (5.64% of land area) of NPWS designated sites occur in the county.

9. Of the wetland sites identified in Wexford, 43 lie within areas designated for nature conservation while the remaining 324 are outside of designated areas. A significant proportion of these undesignated sites,

most of which have not been subject to ecological survey, are likely to support habitats and species of conservation importance.

10. Our incomplete knowledge of 313 of the wetland areas in County Wexford, which have not been subject to any detailed ecological survey, suggests that a targeted wetland survey should be a key priority to gain a better understanding of the wetland resource within the county and to ensure that those sites of highest importance are protected.

11. Sites to be prioritised for survey should include those that have not been surveyed in detail in the past and those that are likely to contain wetland habitats of high conservation importance. Based on this, the following groups of sites should be prioritised:

    - Sites identified by analysis of aerial photography and other GIS datasets for which we have no ecological data;

    - Sites that are likely to contain wetland habitats that are listed on Annex I of the EU Habitats Directive (raised bog including regenerating cutover, turloughs, alkaline fen, transition mire, and calcareous springs); and

    - County Council owned properties that contain areas of potential wetland.

12. Other recommendations from the study include:

    - The datasets developed during the current study should be updated as new information becomes available.

    - Extra resources should be put towards enforcing regulations aimed at protecting wetland sites throughout County Wexford.

    - A public awareness campaign should be run to inform and raise awareness on the diverse wetland resource of the country and the value of this resource through the provision of important ecosystem services.

1 Introduction

1.1 Background

Following discussions with the Heritage Officer of Wexford County Council, Wetland Surveys Ireland agreed to partner with the County Council in the production of a map and associated database holding information on all freshwater wetlands in County Wexford.

Prior to this project no complete inventory of wetland areas existed for the county. The wetlands in Wexford are not only important from the perspective of biodiversity, and for their economic value (i.e. tourism and recreation use), but they also provide many other important ecosystem services such as flood prevention, provision of clean water, and carbon storage.

The lack of county wetland inventories has resulted in an incomplete picture of the distribution and extent of wetlands in County Wexford. The lack of data on wetlands, their distribution and extent in combination with the threats faced by these habitats from various land-uses including peat extraction, afforestation, infilling, and drainage may lead to the future loss of sites which have a county, national or even international value for biodiversity protection, and makes the development of wetland conservation programmes at a county level difficult. The outputs of this project contribute to fulfilling three of the seven objectives of the published National Biodiversity Action Plan (NPWS 2017) by providing baseline information on biodiversity that can be used to inform management, decision making, and public awareness initiatives.

1.2 Project aims

To overcome the information deficit on the distribution of wetlands within the county, the main aim of the WXWS 2022 was to prepare a Geographic Information System (GIS) dataset and associated site database of all wetland areas in the county.

The wetland habitats to be mapped included lakes and ponds, watercourses, springs, freshwater swamps, wet grassland, freshwater marsh, peat bogs, fens and flushes, semi-natural wet woodlands and coastal wetlands.

The WXWS 2022 partnership project aimed to consolidate all known third party information on wetlands in County Wexford, based on GIS and published information held by Government and State agencies, non-governmental organisations and private individuals, and information documented in published and unpublished reports.

In addition to previously reported sites, a desktop survey of other potential wetland sites was undertaken using digital aerial photography and other GIS datasets (such as sub-soils, six inch mapping, Corine land-cover, geology, and soils, etc.).

Based on the results of this study, recommendations on priorities for future surveys are made based on critical or endangered habitats and geographical areas within the county where data is particularly lacking.

The methodologies employed in the survey are documented in this report, together with a description of the importance of wetlands, the main wetland habitats present in County Wexford, and key findings from the current study.

2 Introduction to Wetlands

2.1 Definition

Wetland is a collective term for ecosystems (habitats and their associated species) whose formation has been dominated by water, and whose processes and characteristics are largely controlled by water. A wetland is a place that has been wet enough for a long enough time to develop specially adapted vegetation and other organisms (Maltby 1986).

They occur where the water table is at or near the surface of the land, or where the land is covered by a layer of shallow water, for some or all of the year.

The 1971 Ramsar Convention on Wetlands of International Importance defines wetland as:

> ***"areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters".***

The Planning and Development (Amendment) (No. 2) Regulations 2011 has a similar definition to that presented above:

> ***"Wetlands" means natural or artificial areas where biogeochemical functions depend notably on constant or periodic shallow inundation, or saturation, by standing or flowing fresh, brackish or saline water."***

In addition, for the purpose of protecting coherent sites, Article 2.1 of the Ramsar Convention, to which Ireland is a signatory, provides that wetland sites:

> **"may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water not deeper than six meters at low tide lying within the wetlands".**

Five major wetland types are generally recognized:

- **marine** (coastal wetlands including coastal lagoons, rocky shores, and coral reefs);
- **estuarine** (including deltas, tidal marshes, and mangrove swamps);
- **lacustrine** (wetlands associated with lakes);
- **riverine** (wetlands along rivers and streams); and
- **palustrine** (meaning "marshy" – wet grassland, marshes, swamps and bogs).

In addition to naturally occurring wetlands produced as a result of natural environmental processes, there are artificial wetlands such as fish ponds, farm ponds, irrigated agricultural land, reservoirs, gravel pits, sewage treatment facilities, and drainage ditches.

Even in certain, so called "natural" wetland systems, humans have played a major factor in wetland formation since pre-historic times. In Ireland, forest clearance in the uplands helped trigger soil and vegetation changes, which altered the hydrology and led in some places to bog formation. In contrast to

some other habitat types (e.g. woodlands), wetlands are therefore often young and dynamic ecosystems, changing in a relatively short period of time as vegetation changes, sediments are laid down, and local hydrological conditions are altered.

One other concept that should be borne in mind when considering wetlands is that a specific wetland area is often composed of many different habitat types, which form a mosaic. For example, a cutover bog wetland may contain small areas of regenerating fen and bog communities, pools, drainage ditches, and even shallow lakes.

On a global scale, wetlands occur everywhere, from the tundra to the tropics. The area of the earth's surface currently covered by wetlands is unknown. However, the UNEP - World Conservation Monitoring Centre has suggested an estimate of about 570 million hectares (5.7 million km^2) of wetland – roughly 6% of the Earth's land surface – of which 2% are lakes, 30% bogs, 26% fens, 20% swamps, and 15% floodplains.

In the context of the WXWS, analysis of sub-soil data suggests that wetlands once covered an area of 621 km^2, equivalent to approximately 39% of the land area of Wexford. Provisional wetland site boundaries drawn during WXWS indicate that wetland sites in county Wexford currently cover an area of 375 km^2 (23.5% of land area). The exact extent of wetlands will only be determined when field surveys of wetland sites have been completed.

2.2 Importance of wetlands

As with many other natural environments, humanity has generally looked on wetlands as an economic resource to be used for short term economic gain, and has often not recognised the long term benefits (both economic and non-economic) of functioning wetlands (DEHLG 2008). Three examples of such actions in Ireland include:

- national and local drainage schemes, or the embankment of rivers which can result in catastrophic floods during high rainfall periods when the drained land results in rapid surface water run-off;
- past forestry schemes on bogs, which often did not produce the timber crop envisaged at the time of afforestation; and
- overgrazing of blanket bog which continues to have a detrimental effect on the national peatland resource.

The multiple roles of wetland ecosystems and their value to humanity have been increasingly understood and documented in recent years (NPWS 2017, DEHLG 2008). Internationally, this has led to large expenditures to restore the lost or degraded hydrological and biological functions of wetlands.

Functional wetlands are among the world's most productive environments. They are a haven of biological diversity, providing the water and primary productivity upon which a great range of plants and animals depend. They support high concentrations and diversity of birds, mammals, reptiles, amphibians, fish, and especially invertebrates.

Wetlands provide many economic benefits including:

- **Wetlands improve water quality** by removing and sequestering pollutants and sediments in the water;

- **Wetlands are of high importance to fisheries.** Over two thirds of the world's fish harvest is linked to the health of coastal and inland wetland areas;

- Wetlands may be of high importance to **agriculture and timber production**, through the maintenance of water tables and nutrient retention in floodplains;

- **Wetlands store floodwaters,** acting like natural sponges and slowing down the force of flood and storm waters as they travel downstream. Far from posing a flood threat, wetlands should be viewed as buffers, to protect areas where people live (DEHLG 2008);

- Wetlands may provide important **energy resources**, such as peat and plant matter;

- **Wetlands may be of value to transport, recreation, and tourism;**

- Wetlands offer **habitat for wildlife**. Many migratory birds and other wildlife depend on the ecological setting of wetlands for their survival;

- **Wetlands support biodiversity.** The variety of living organisms found in wetlands contributes to the health of our planet and our own lives possible by ensuring our food supply, regulating the atmosphere and providing raw materials for industry and medicine;

- **Wetlands provide valuable open space and create wonderful recreational opportunities.** Hiking, fishing, boating and bird watching are just a few of the activities people can enjoy in wetland areas. The scenic vistas of wetlands make them an ideal area for nature photographers or painters; and

- **Wetlands are vital in preventing further climate change by acting as a store of carbon.** Peatlands are known to store 20-30% of the world's soil carbon exceeding by three times the amounts stored in tropical rainforests (Bragg and Lindsay 2003).

In addition, wetlands have special attributes as part of the cultural heritage of humanity: they are related to religious and cosmological beliefs, constitute a source of aesthetic inspiration, provide wildlife sanctuaries, and form the basis of many important local traditions.

These functions, values, and attributes of wetlands can only be maintained if the ecological processes of wetlands are allowed to continue functioning. Unfortunately, and in spite of important progress made in recent decades, wetlands continue to be among the world's most threatened ecosystems, owing mainly to ongoing drainage, conversion (most often to agricultural lands), pollution, and over-exploitation of their resources.

To date, society has generally only realised the benefit of wetland services after they have disappeared or been seriously degraded (NPWS 2017). Damaged or degraded wetlands are not able to provide the range of ecosystem services provided by intact wetlands which can be categorised into four main categories; provisioning, cultural, regulating and supporting (see Figure 1). Problems with flooding, lost recreational opportunities, reduced fish populations, and more costly water treatment are examples of lost benefits only understood after a wetland ecosystem has been degraded or destroyed. The loss of these ecosystem services is accompanied by costs associated with restoring wetlands or providing the lost services in other ways. These are costs could have been avoided if the value of the wetland was initially recognised.

Putting an economic value on something as abstract as the ecological services of a wetland is a difficult idea for most people, but is becoming a more accepted economic tool. The concept of natural capital, which views natural resources as assets or stocks that yield a flow of benefits to humans, is gaining attention, with the aim of supporting more sustainable decision making.

A number of reports give clear examples of the economic value of wetlands. The UK Environment Agency has a wealth of literature showing the value of intact functioning wetlands in the control and alleviation of flooding episodes (Callan 2008). In addition, a number of reports exist which show that intact wetland systems provide excellent value for money in the provision of water services when compared to the costs that would accrue if these services had to be supplied by artificial systems. For example, in the USA the State of New York purchased a watershed area at a cost of $1.5 billion, rather than spend the estimated $3 - 8 billion it would have cost for artificial waste water treatment facilities to do the same job (Ramsar Bureau 2006).

In a report by the Biodiversity Unit of the Department of the Environment, Heritage and Local Government (DEHLG 2008) the biodiversity value of wetlands in Ireland was estimated to be worth €385 million per year to the Irish economy. In addition a further proportion of the €330 million assigned by this study to the economic value of the nature and eco-tourism value of all Irish habitats can be assigned to wetlands. One other stark conclusion to emerge from this report was that "*it is clear that the benefits of biodiversity far exceed the costs of the current levels of biodiversity protection*" in Ireland, an indication that we still do not value the functions and services provided by wetlands to our well-being as a society.

In many ways, the economic benefits received from wetlands are comparable to the benefits received from things such as public schooling, health care and municipal infrastructure. The idea behind putting an economic value on some of these wetland benefits before ecosystem-altering decisions are made is to recognise these potential costs up front and thereby put wetland-related decisions on a more economically sound footing. However, the concept of ecosystem services and natural capital are human centric approaches and it is important to also consider the intrinsic value of wetlands that cannot be valued in monetary terms. As outlined by Pagoila *et al.* (2004) human benefit is not the only reason to be concerned about ecosystems. Based on ethical, philosophical, or cultural traditions, many consider some ecosystems as having intrinsic value, irrespective of whether they contribute to human welfare (Goulder & Kennedy, 1997; Millennium Ecosystem Assessment, 2003). Understanding the economic costs and benefits of using ecosystems is thus only one of many inputs that enter into decision making (Pergoila *et al.* 2004).

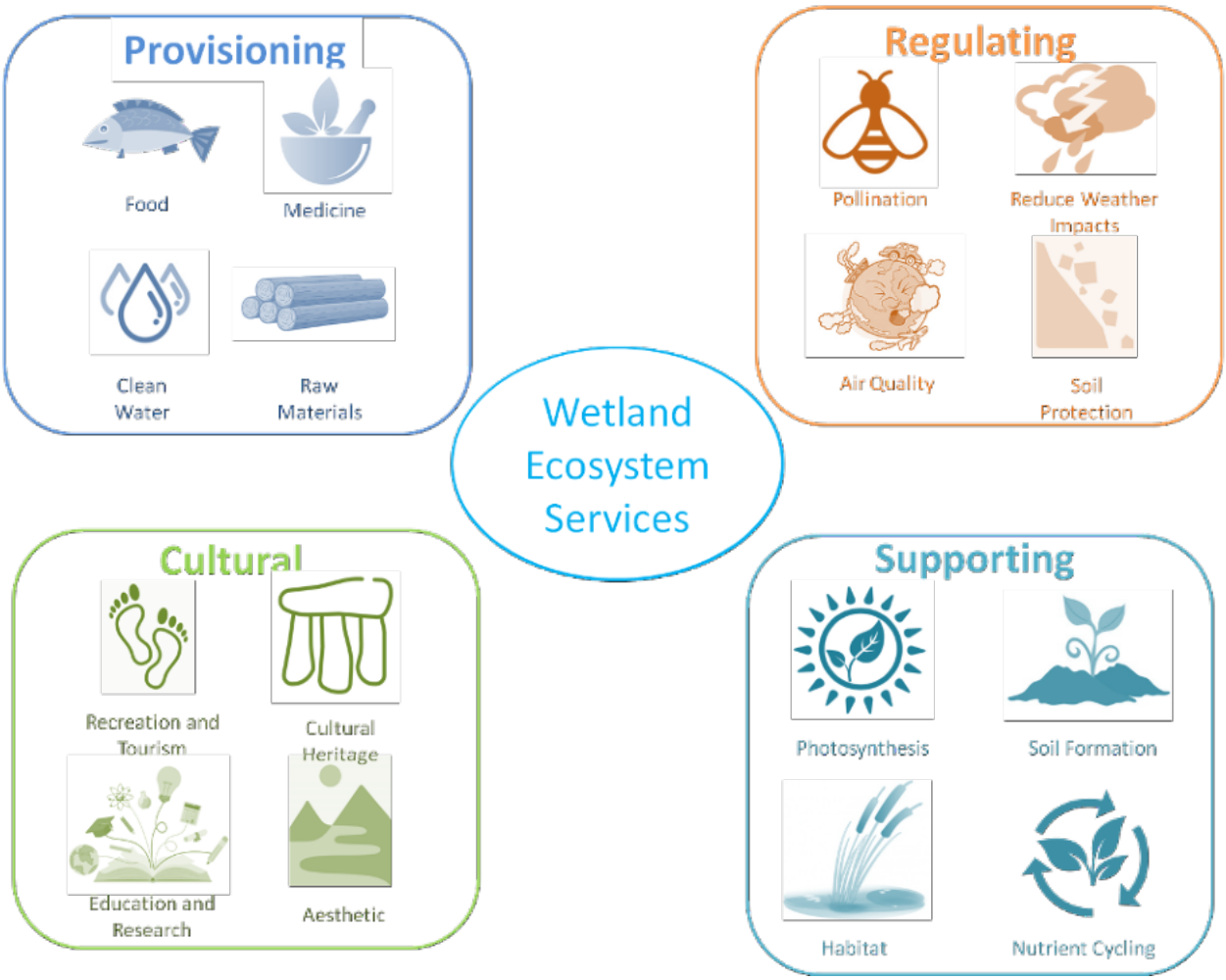

Figure 1: Four main categories of ecosystem services provided by wetlands.

2.3 Protection of wetlands

The importance of wetlands is recognised in planning legislation and has been strengthened by amendments to the Planning and Development Regulations in 2011. The Planning and Development (Amendment) (No. 2) Regulations 2011 define wetlands as follows:

> ***"Wetlands" means natural or artificial areas where biogeochemical functions depend notably on constant or periodic shallow inundation, or saturation, by standing or flowing fresh, brackish or saline water."***

These regulations bring the drainage and reclamation of Wetlands under Planning Control, making planning permission a requirement for the drainage or infilling of wetland areas 0.1 ha or above, and requiring an Environmental Impact Assessment (EIA) to accompany applications of 2 ha or more. Where a Planning Authority considers that applications for drainage which fall under the above thresholds (i.e. less than 0.1 ha) are likely to have a 'significant effect on the environment' an EIA will also be required (Department of the Environment, Community and Local Government 2011).

The Department of Agriculture, Fisheries and Marine (DAFM) have a consent in relation to certain agricultural activities that may affect wetlands. Under the European Communities (EIA) (Agriculture) Regulations 2011 landowners must seek 'screening' from the DAFM prior to undertaking certain works, including drainage of agricultural land or infilling of earth (above 15 ha and 2 ha thresholds respectively), and consent can only be given following a screening process, where it can be shown that wetlands are not affected. Activities below the relevant thresholds which would have a 'significant effect on the environment, a Natura 2000 site (Special Area of Conservation (SAC) or Special Protection Area (SPA)), a Natural Heritage Area (NHA) or a recorded monument' may also not proceed without a positive outcome from screening.

On a county level, wetlands in Wexford are protected through the scope of the river basin and sub basin management plans associated with the implementation of the EU Water Framework Directive. In addition the Wexford County Development Plan (2021-2027) states that the County Council is committed to the conservation and preservation of the environment and natural resources. The Wexford County Development Plan also specifies the importance of preserving designated ecological sites, biodiversity and wetlands as these are significant features of the landscape of County Wexford (Objectives NH01; NH03; NH04; NH09; NH10).

3 Wetlands in County Wexford

3.1 County Wexford: an introduction

County Wexford has an area of 2,367km^2 (or 236,700ha). It is the 13th largest of the 32 counties by area. The county is bounded by Carlow, Kilkenny and Waterford to the west, Wicklow to the north and the Irish sea to the east and Celtic Sea to the south. County Wexford is a maritime county and is located in the 'sunny south-east' of Ireland, a name given due to its high amount of annual sunshine recorded.

County Wexford is known to contain a wide variety of coastal and inland wetlands, which support many flora and fauna species of high conservation concern. Due to the varying topography, geology, hydrology, climate, and soils present, Wexford has wetland habitats ranging from wet heaths, fens, marshes, rivers and associated floodplains, lakes, springs, wet woodlands, and coastal habitats including lagoons, saline lakes, estuaries, salt marsh and dune slacks (see

Figure 3).

Wexford has a 120 km long coastline which includes sandy beaches and larger estuaries, many of which have been designated for the wetlands and species these areas support, as being of national and international conservation value and include: Wexford Habour & Bay; Rosslare Bay; Ballyteige Bay; Bannow Bay; Sandeel Bay; Lumsdin's Bay; Barrow Estuary and Tacumshin Bay.

Notable feature of the south eastern coastal plain is the abundance of small lakes and waterbodies located in a gently undulating hilly landscape called kames. The lakes are known as kettle holes and were formed at the end of the last glaciation, as a result of blocks of dead ice left behind by retreating glaciers, which became wholly or partly buried by sediment deposited by meltwater streams. The ice becomes buried in the sediment and when the ice melts, a depression is left called a kettle hole, creating a dimpled appearance on the outwash plain. After the kettle holes filled with water they support a variety of wetlands including lakes, wet woodlands, reedswamp and other wetlands.

The main rivers flowing through the county, which mostly flow from the north to south, are the Barrow, Slaney, Corock, Owenduff and the Bann, while the Owenavoragh flows from west to east, entering the sea at Courtown. The River Barrow forms the western boundary of County Wexford. The Blackstairs Mountains form part of the boundary to the north, as do the southern edges of the Wicklow Mountains. Mount Leinster at 2610 feet (796m) is the highest point in the county.

Lakes, rivers, pasture land, and wetland typify Wexford's generally low-lying landscapes, with upland bog, heathland and grassland habitats being more common in upland areas in the northern western part of the county.

Ireland is divided into eight River Basin Districts with County Wexford falling mostly within the South Eastern RBD and just some small areas in the extreme north of the County being part of the Eastern RBD (see
Figure 2). These River Basin Districts are further broken down into 46 catchment management units, of which four occur within the County:

- Owenavorragh (CMU 11);

- Slaney & Wexford Harbour (CMU 12)
- Ballyteigue-Bannow (CMU 13); and
- Barrow (CMU 14).

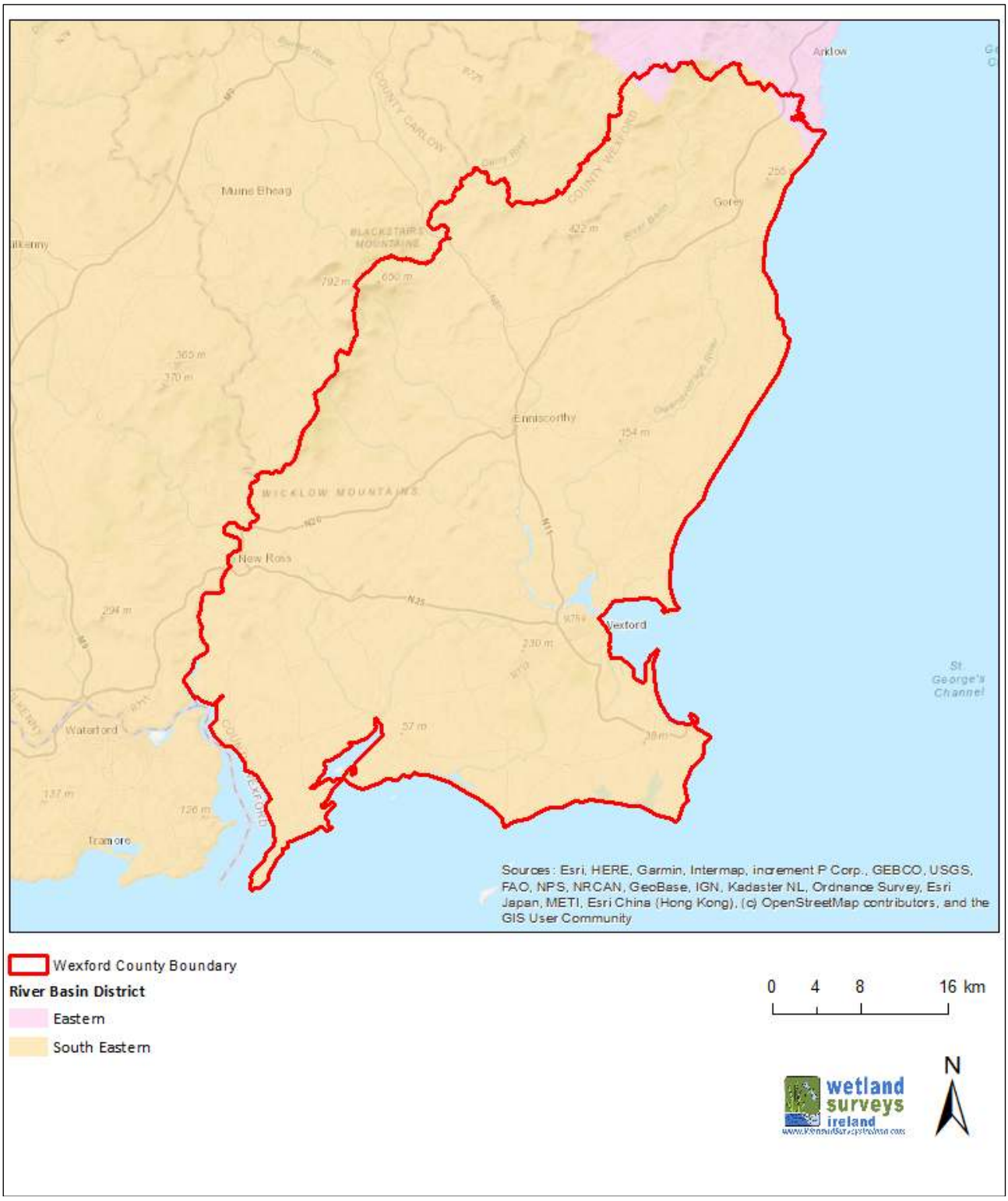

Figure 2: River Basin Districts occurring in County Waterford (Source: EPA, 2005).

The surface water drainage features and river catchments in County Wexford are shown in Figure **4**.

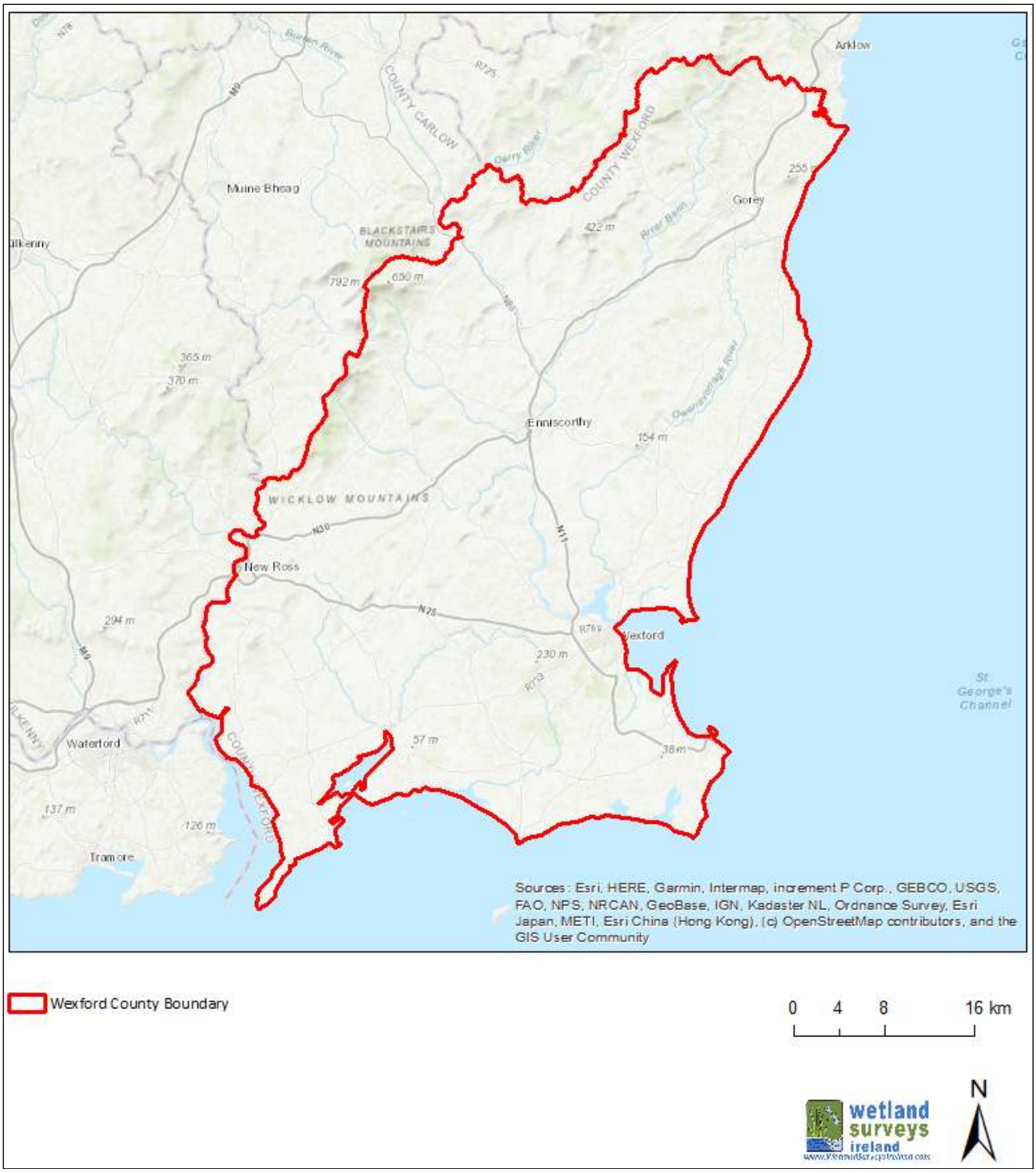

Figure 3: Topography and drainage map of County Wexford.

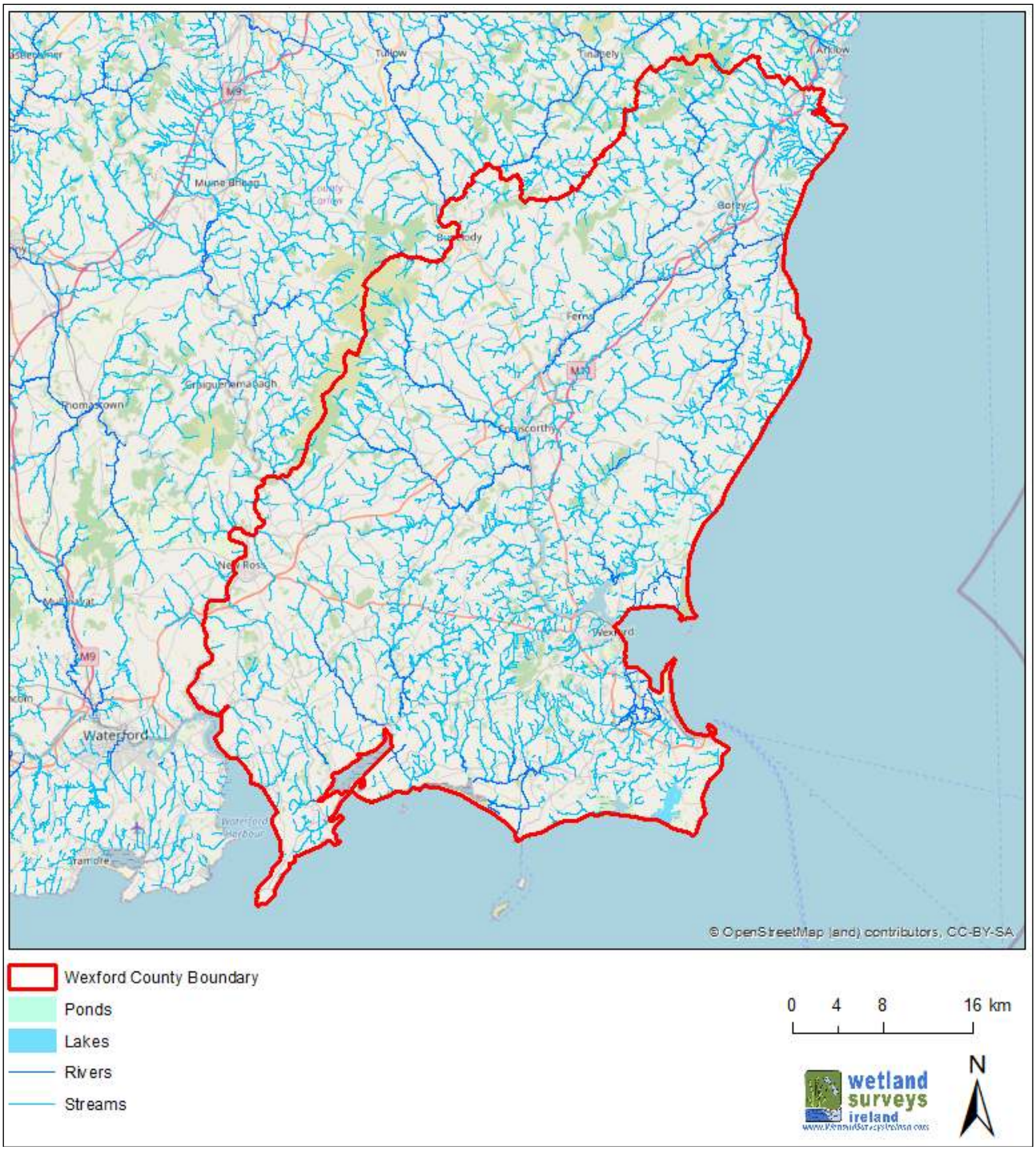

Figure 4: Map showing surface water features of County Wexford (drawn using EPA datasets).

3.1.1 Geology

Maps showing the bedrock geology of the County Wexford is presented as Figure 5.

The rocks of Wexford are very complex in their type and geometry. A complex of igneous and metamorphic rocks, from before 485 million years ago, dominates the south eastern part of the county, and is represented by the granites around Carnsore Point and the quartzites, gneisses and schists of the area between Kilmore Quay and Rosslare. These are some of the oldest rocks in Ireland see Figure 5 (Meehan et al. 2018).

The majority of the county is underlain by rocks from between 485 and 444 million years ago, which are Ordovician age shales, siltstones and greywackes. Granites of Devonian age, from around 400 million years ago, occur in the Blackstairs Mountains.

Around 346 million years ago warm tropical seas flooded lower areas and deposited the generally fossiliferous Carboniferous limestone, now found as the bedrock in the lowland zone between Ballyteige Bay and Wexford Harbour. Both this and the Devonian rocks were folded into large scale folds at the end of the Carboniferous Period.

Following erosion over several hundred million years, the last two million years have had most impact on the landscape with glaciers eroding the high ground leaving ice-sculpted rock crags across the county, and blanketing much of the lower ground with till. Since the ice age, coastal processes have both eroded the glacial materials, and left complex ecosystems such as that around Tacumshin Lake, the Cahore Polders and Dunes and Lady's Island Lake (Meehan et al. 2018).

The geology and soils of County Wexford are the predominant factors influencing the habitats which development. The underlying geology generates a variety of soil-forming parent materials, which are an important element in governing the distribution of vegetation (Kearney 2011).

At the end of the ice age, when the glaciers lay further north in the country than Wexford but the county was still exceptionally cold, unique features such as the pingos at Camaross and the infilled till cracks at Kilmore Quay were formed, by intense freezing and thawing processes.

At the end of glaciation, the land of Ireland rose as relative sea level dropped, owing to a lift in the country afforded by the weight of the ice having been removed when it melted. Raised beaches are common along the Wexford Coast, at Fethard and Cullenstown, and record this process. In the Holocene Period, since glaciation, extensive mudflats have formed at the edge of the modern day beaches throughout the area of Wexford Harbour and Ballyteige Bay. Beaches such as Curracloe Beach, and dune fields such as in the Kilpatrick Sandhills and at Cahore Point, have formed. As well as this, river erosion has occurred along the major rivers in the county, and peat has formed in the Blackstairs Mountains (Meehan et al. 2018).

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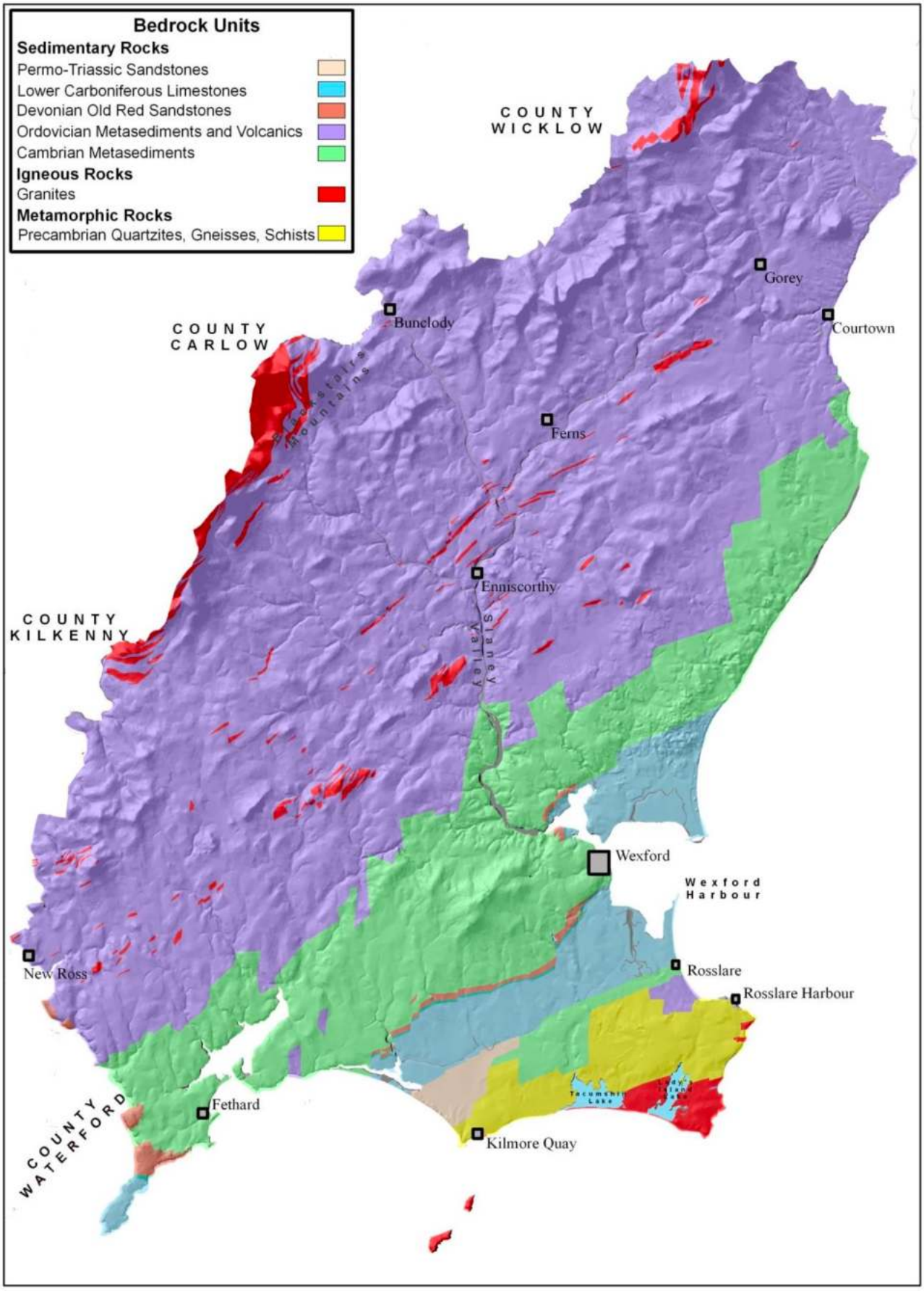

Figure 5: Bedrock map of County Wexford (drawn using Geological Survey of Ireland (GSI) dataset).

3.1.2 Sub-soils

The geology and soils of County Wexford are the predominant factors influencing the habitats which development. The underlying geology generates a variety of soil-forming parent materials, which are an important element in governing the distribution of vegetation (Kearney 2011).

The various sub-soils that were used to indicate potential wetland areas during the GIS analysis of the county's wetland resource are presented in Table 1 (as mapped by Meehan 2004). A map showing the full extent of these sub-soil types (full extent of potential wetland) for Wexford is presented in Figure 6.

Table 1: The sub-soil types used to identify potential wetlands in County Wexford (from Teagasc Parent Material map (Meehan 2004)).

Sub-soil type	Code	Likely wetland type (Fossitt)
Mineral alluvium	A	GM1
Cutaway (Basin & Blanket Peats)[1]	Cut	PB1/PB4/FS1/PF2/PF3
Blanket Peat	BktPt	PB3/PB4/HH3
Basin Peat (Fen Peat)	FenPt	PF1/PF2/PF3
Lacustrine	L	GM1/FS1/FS2/FP1/FP2/PF1/PF2
Clayey	Lc	GM1
Marl	Mrl	PB4 / PB1
Lake (including reservoirs)	Water	FL

Based on analysis of the extent of sub-soil types that indicate wetland areas, the total original area of wetland within County Wexford is estimated to cover 15,344ha or 6.48% of the county of the total area of the county. While an indication of the original extent of wetlands, this calculation is certainly an over estimate of the current wetland extent as it does not take account of changes due to changes in land management and reclamation or the impact of drainage. Table 2 (Foss & Crushell 2019) provides a breakdown of the extent of the different wetland indicating subsoils originally present in Co. Wexford.

Table 2: Extent of sub-soil types that indicate original wetland extent after GSI (2018).

Wetland Indicating sub-soil type	Original Area (ha)
Alluvium	9,766
Blanket Peat	231
Cut over raised peat	282
Estuarine silts and clays	2,796
Fen Peat	133
Lacustrine clays	7
Lacustrine sediments	665
Water	1,464
Total	***15,344***

[1] This category also includes remnant areas of intact raised bog in County Leitrim.

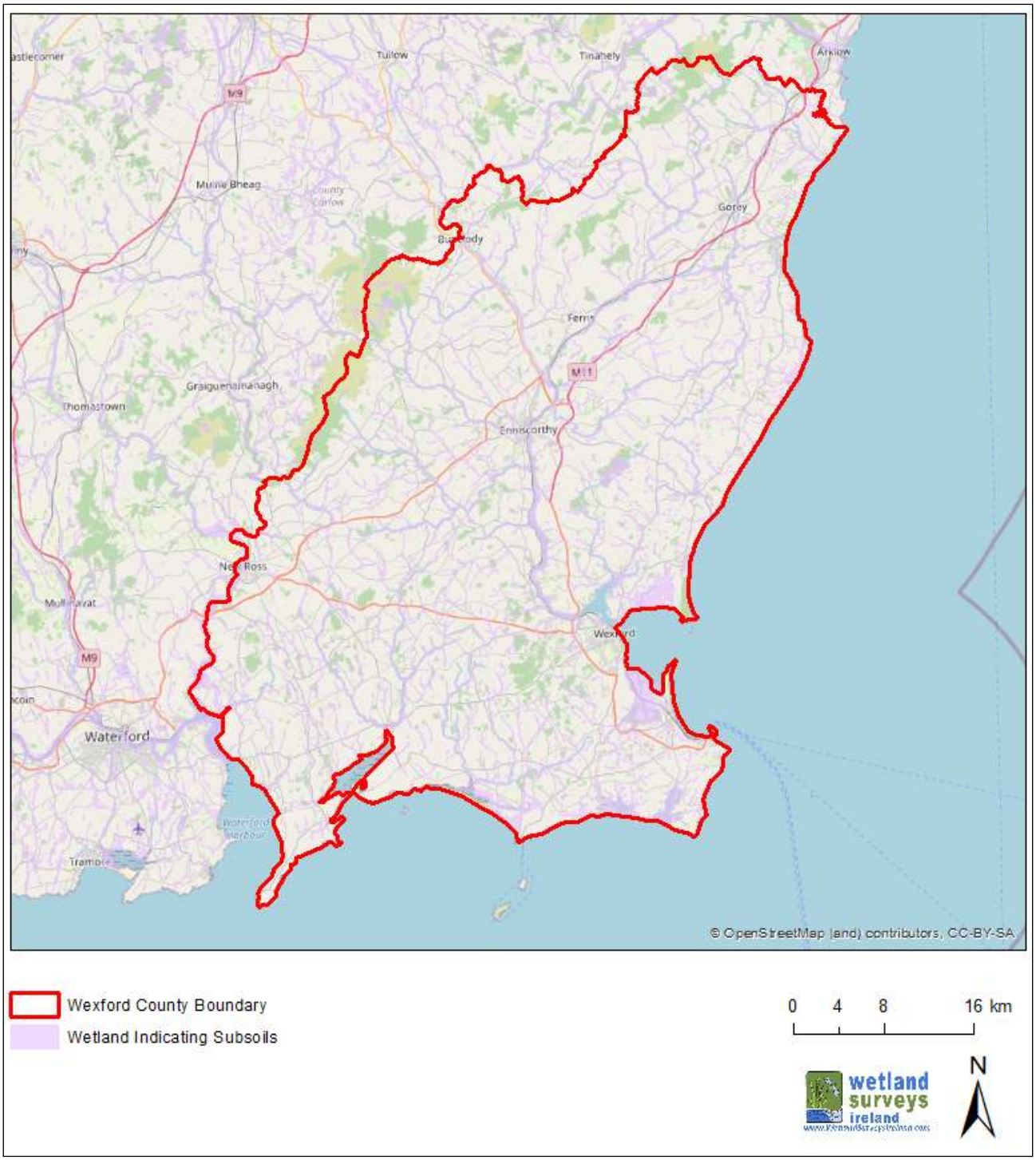

Figure 6: Wetland indicating sub-soil (parent material) map of County Wexford. Source: Teagasc subsoil (or parent material) map (Meehan 2004).

Wetland Habitats in County Wexford

County Wexford contains a wide range of wetlands of international and national importance. Due to the topography, hydrology, climate and soils present it has wetland habitats ranging from coastal saltwater habitats, fens, marshes, large riverine systems, a variety of lake types, and wet woodlands, but only a limited selection of bog habitats.

The WXWS 2022 set out to map the distribution and extent of all known and potential wetland areas in County Wexford. This is the first such inventory of wetland sites in this county. The current study focused on the identification of 38 wetland habitat types (26 of which may correspond with habitats listed on Annex I of the EU Habitats Directive) that could be recorded in County Wexford (see Table 3).

This section provides a brief description and illustration of the main freshwater wetland habitat types likely to occur in Wexford as defined by the Heritage Council habitat classification system (Fossitt 2000)[1], together with examples of where they have been reported in the county. An indication is also provided of the main threats faced nationally by those wetlands habitats deemed to be of high conservation importance, based mainly on the National Parks and Wildlife Service (NPWS) report entitled 'The Status of EU Protected Habitats and Species in Ireland' (NPWS 2019). Further details on the habitat characteristics together with their relationship to habitats listed on the EU Annex I Habitats Directive habitats are presented in Fossitt (2000).

The Heritage Council Guide to Habitats in Ireland (Fossitt 2000) sets out a standard hierarchical scheme for the identification of habitats in Ireland. It provides a practical tool to allow identification and recording of habitat types. The guide lists the main wetland habitats in Ireland under the main level 1 categories of freshwater, grassland and marsh, heath and dense bracken, peatlands, woodland and scrub, and coastal. Table 3 lists the principal wetland habitat types likely to occur in the wetland sites identified during the WXWS 2022. The level 1 wetland habitat categories are further divided to level 2 and subsequently level 3 as shown in . These levels provide progressively more detail of the specific wetland habitat(s) recognised.

Recent targeted national surveys commissioned by the NPWS are improving our knowledge of the extent of particular habitats in Wexford (Perrin *et al.* 2008; Perrin *et al.* 2013; O'Neill *et al.* 2013; O'Neil and Martin 2015; and NPWS 2013). However, to date there has been no systematic survey of many wetland types such as fens and marshes in the county. A pilot study is currently underway with the aim of scoping a national survey of fen habitat in Ireland (M. Eakin *pers. comm.).*

Table 3: Wetland habitat types (Fossitt 2000) recorded as part of the County Wexford Wetland Survey 2019.

Fossitt Level 1 Habitat Code and Name	**Fossitt Level 2 Habitat Code and Name**	**Fossitt Level 3 Habitat Code and Name**
F Freshwater	FL Lakes and Ponds	FL1 Dystrophic lakes *
		FL2 Acid oligotrophic lakes *
		FL4 Mesotrophic lakes
		FL5 Eutrophic lakes *
		FL7 Reservoirs
		FL8 Other artificial lakes and ponds
	FW Watercourses	FW1 Eroding/upland rivers *
		FW2 Depositing/lowland rivers *
		FW4 Drainage ditches
	FP Springs	FP1 Calcareous springs **
		FP2 Non-Calcareous springs
	FS Swamps	FS1 Reed and large sedge swamps
		FS2 Tall herb swamps *
G Grassland and Marsh	GS Semi-natural grassland	GS4 Wet grassland *
	GM Freshwater marsh	GM1 Marsh *
H Heath & dense bracken	HH Heath	HH3 Wet heath *
P Peatlands	PB Bogs	PB1 Raised bogs **
		PB2 Upland blanket bog **
		PB4 Cutover bog *
		PB5 Eroding blanket bog
	PF Fens and Flushes	PF1 Rich fen and flush **
		PF2 Poor fen and flush
		PF3 Transition mire and quaking bog *
W Woodland and scrub	WN Semi-natural woodland	WN4 Wet pedunculate oak-ash woodland **
		WN5 Riparian woodland
		WN6 Wet willow-alder-ash woodland
		WN7 Bog woodland **
	WS Scrub/transitional woodland	WS1 Scrub *
C Coastland	CW Brackish waters	CW1 Lagoons and saline lakes **
		CW2 Tidal rivers *
	CM Salt marshes	CM1 Lower salt marsh *
		CM2 Upper salt march *
	CD Sand dune systems	CD5 Dune slacks *
M Marine	MW Marine water body	MW4 Estuaries *
Wetland habitats not recorded during the County Wexford Wetland Survey 2022		
	FL Lakes and Ponds	FL3 Limestone/marl lakes
		FL6 Turloughs **
	FW Watercourses	FW3 Canals
	PB Bogs	PB3 Lowland blanket bog **

*Note: Level 3 Fossitt habitats with an equivalent habitat under Annex I of the EU Habitats Directive are marked with an *, while **priority** habitats under the EU Habitats Directive are marked with **.*

FL 3 - Limestone and marl lakes

Hard-water lake habitat is listed as an Annex I habitat (3140) under the EU Habitats Directive. Hard water lakes and ponds of limestone areas that are base-rich and poor to moderately rich in nutrients (oligo to mesotrophic).

The water is typically clear and the lake sediment usually has a high proportion of marl, a white clay precipitate of calcium carbonate. Marl-forming Stoneworts (*Chara* spp.) are often abundant and may form dense carpets in unpolluted waters. Various-leaved Pondweed (*Potamogeton gramineus*) is also characteristic. These lakes are frequently fringed by alkaline fen and flush vegetation. These lakes are important habitats for insect and birds.

Hard water lakes are often shallow and have a natural high capacity to buffer the effects of enrichment from phosphorus. However, build up of phosphorus in the sediment of these lakes can lead to rapid shifts in ecosystem quality. There is a continued threat from nutrient enrichment in these lowland lakes arising from intensification of agriculture and urban developments.

This habitat does not occur in Co. Wexford (Source: Google Street View).

FL4 - Mesotrophic lakes

Lakes and ponds that are moderately rich in nutrients, and where the water is sometimes discoloured by algae. Characteristic aquatic plants include White Water-lily (*Nymphaea alba*), Yellow Water-lily (*Nuphar lutea*), and a large number of Pondweeds, Stoneworts (*Chara* spp.) may also be present. The fringing and aquatic plant communities are typically more lush than those associated with oligotrophic lakes. These lakes are important habitats for insect and birds.

The principal threats to mesotrophic

lakes include nutrient enrichment arising from agricultural practices such as overgrazing and excessive fertilisation, as well as afforestation, and waste water from housing developments in rural areas. Lakes may also be negatively affected by the introduction of invasive alien species, and their utilization for an increasing number of sport and leisure activities.

The lake at Ballykelly Marsh pNHA and Castletalbot Lake in County Wexford are examples of mesotrophic lakes (Castletalbot illustrated; Source: Castle Talbot Lake and Nature Walk).

FL5 - Eutrophic lakes

Rich pondweed lake habitats are an Annex I habitat (3150) under the EU Habitats Directive.

Eutrophic lakes and ponds that are high in nutrients and base-rich and the water is usually discoloured or turbid, often grey to green in colour, from the abundant algae and suspended matter present.

Some water bodies are naturally eutrophic but most Irish lakes are eutrophic as a result of enrichment and high levels of nutrients entering the water.

Characteristic aquatic plants of eutrophic lakes and ponds include Duckweeds (*Lemna* spp.), Pondweeds (*Potamogeton* spp.), and Spiked Water-milfoil (*Myriophyllum spicatum*). Submerged aquatics are usually rare or are restricted to shallow waters owing to poor light penetration. Reed beds on sheltered shores and dense stands of fringing vegetation are characteristic of eutrophic lakes and ponds. The main threat to this lake type is further nutrient enrichment caused by human activities.

Johnstown Castle Lakes in Co. Wexford (illustrated; Source: Teagasc), may correspond to this habitat type.

FL8 - Other artificial lakes and ponds

This category includes farm ponds, artificial or ornamental bodies of standing water that may be found in parks, demesnes, gardens or golf courses as well as flooded quarries, tailings ponds and water treatment plants (with open water). The nutrient status of these artificial water bodies is variable and may be high as in the

case of hypertrophic lakes in urban parks.

These water bodies are often important habitats for invertebrates and amphibians as they represent a more 'natural' habitat within otherwise highly managed environments. They may also have a high educational value in urban areas as a first contact point for people with a wetland habitat and its wildlife. The main threats faced by such habitats include water pollution, habitat destruction caused by changes in farming practice or abandonment and infill by encroaching vegetation.

An example of this habitat can be seen at the constructed wetland site at Ferns Lower in Co. Wexford, used to treat municipal waste water (illustrated; Source: P. Foss).

FW1 - Eroding/upland rivers

The EU Annex I habitats Vegetation of flowing waters (3260) or *Chenopodium rubri* (3270) may correspond with this habitat type.

Natural watercourses, or sections of these, that are actively eroding, unstable and where there is little or no deposition of fine sediment. Eroding conditions are typically associated with the upland parts of river systems where gradients are often steep, and water flow is fast and turbulent. For some rivers on the seaward side of coastal mountains, particularly in the west of Ireland, eroding conditions persist to sea level because of comparatively steep gradients over short distances, and high rainfall. Small sections of other lowland rivers may also be eroding where there are waterfalls, rapids or weirs. The beds of eroding/upland rivers are characterised by exposed bedrock and loose rock. Pebbles, gravel and coarse sand may accumulate in places, but finer sediments are rarely deposited. These rivers vary in size but are usually smaller and shallower than depositing/lowland rivers.

The unstable rocky channels of eroding/upland rivers usually support little vegetation cover. Submerged rocks and boulders may be colonised by aquatic mosses. Exposed rocks and wet shaded banks may also support extensive cover of lichens and liverworts. Higher plants are generally rare or absent except in places where fine sediments are trapped.

Pressures from eutrophication, overgrazing, excessive fertilisation, afforestation and the introduction of invasive alien species are the main threat to this habitat. Almost two thirds of the rivers assessed by the Environmental Protection Agency (EPA) are at risk of failing to meet their environmental objectives.

This habitat occurs in the uplands in the Blackstairs Mountains SAC the north-west of County Wexford.

FW2 - Depositing/lowland rivers

The EU Annex I habitats Vegetation of flowing waters (3260) or *Chenopodium rubri* (3270) may correspond with this habitat type.

Watercourses, or sections of these, where fine sediments are deposited on the river bed. Depositing conditions are typical of lowland areas where gradients are low and water flow is slow and sluggish. These rivers vary in size but are usually larger and deeper than those above. In a natural state these rivers erode their banks and meander across floodplains.

Plant and animal communities are influenced by numerous factors including substratum type, water force, nutrient status, water quality, channel size, water depth, human impact, disturbance and shade. The substratum of depositing/lowland rivers comprises mainly fine alluvial or peaty sediments. Vegetation may include floating and submerged aquatics, with fringing emergents in shallow water or overgrowing the banks.

Due to their location in lowland areas, where agricultural activities are prevalent and with increased population pressures, most of these rivers have been modified to some extent to control water flow, facilitate navigation or prevent flooding and erosion. Canalised or walled sections of rivers, dredged or deepened sections, and artificial earth banks may occur. These activities all alter the natural river bank and adjacent vegetation occurring along such rivers.

The principal threats to these rivers include nutrient enrichment arising from agricultural practices, human developments along river banks and the introduction of invasive alien species, and utilization for sport and leisure activities.

A number examples of this habitat occur in County Wexford. The River Slaney in Co. Wexford (illustrated; Source: Google Street View) fits into this category.

FW3 – Canals

Canals are artificial linear bodies of water that were originally constructed for the purpose of navigation. They typically lack strong currents and any significant channel or bank erosion. This means that canals tend to have closer affinities with ponds than rivers. They are readily colonised by aquatic plants and frequently support floating, submerged or emergent vegetation.

Locks that are used to control water levels are considered as part of the canal habitat. Canals are important habitats for fish, insect and bird life.

This habitat has not been recorded in Co. Wexford (Source: Google Street View).

FW4 - Drainage ditches

These are linear water bodies or wet channels that are entirely artificial in origin, and some sections of natural watercourses that have been excavated or modified to enhance drainage and control the flow of water. Drainage ditches may be intimately associated with a range of other wetland types, including wet grassland, and modified marsh, bog and fen habitats.

Drainage ditches are generally not used for navigation and are typically narrower than canals. Drainage ditches either contain water (flowing or stagnant) or are wet enough to support wetland vegetation. Water levels are also likely to undergo seasonal fluctuations.

Drainage ditches must be maintained and cleared in order to keep them open. Those that are overgrown with vegetation are likely to be cleared intermittently.

This is a common habitat type throughout County Wexford, examples of the habitat can be seen at many wetland sites in the county.

FS1 - Reed and large sedge swamps

Swamps are commonly found around lakes, on slow flowing river banks and in estuaries.

They are usually species-poor stands of vegetation that are dominated by reeds and other large grasses or large, tussock-forming sedges. Most reed and large sedge swamps are overwhelmingly dominated by one or a small number of species, as in the case of reed beds. Stands of vegetation can range from very dense to open. Unlike tall-herb swamps below, in reed and large sedge swamp the broad-leaved herb component is a minor element in the vegetation.

Swamps support a number of EU protected species including Otter, Sedge Warbler, Water Rail, Moorhen and other water fowl.

The principal threats to this habitat include nutrient enrichment and damage arising from agricultural practices (overgrazing, mowing and drainage), human developments around lakes and utilisation of lakes for increased sport and leisure activities.

Examples of this habitat are common on lake shores and lowland rivers throughout County Wexford. An example of this habitat in Co. Wexford occurs at Ferns Lower (illustrated; Source: P. Foss).

GS4 - Wet grassland

Better examples of the habitat may correspond with *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils are Annex I habitat (6410) under the EU Habitats Directive.

Rushy fields or wet grassland can be found on flat or sloping ground in upland and lowland areas. It occurs on wet or waterlogged mineral or organic soils that are poorly-drained or, in some cases, subjected to seasonal or periodic flooding. On sloping ground, wet grassland is mainly confined to clay-rich gleys and loams, or peaty soils that are wet but not waterlogged. Wet grassland occurs on areas of poorly-drained farmland that have not recently been improved, seasonally flooded alluvial grasslands such as the River Shannon callows, and wet grasslands of turlough basins.

Agricultural intensification over the past century, drainage, increased fertilisation and more recently, abandonment of pastoral systems, which contributes to rank vegetation and scrub encroachment, all lead to the loss of some typical flora and to a reduction in the area of the habitat nationally.

This habitat type is frequent throughout County Wexford, and can be seen in agricultural areas with impeded drainage.

GM1 - Marsh

May correspond with Annex I habitat 'hydrophilous tall herb swamps (6430)' under the EU Habitats Directive.

Marsh is found on level ground near slow-flowing river banks, lake shores, and in other places where mineral or shallow peaty soils are waterlogged, and where the water table is close to ground level for most of the year.

Unlike swamps, standing water is not a characteristic feature except, perhaps, during very wet periods or in winter months. Marshes tend to be comparatively species-rich especially with herbs. It can be an ideal breeding ground for waders such as Snipe.

The main threats to this habitat include the spread of invasive species, arterial drainage and agricultural improvement at the edge of rivers and lakes.

Marsh areas are often under recorded but are likely to be relatively common throughout County Wexford. An example of this habitat in Co. Wexford occurs at Corock River Marsh with the Bannow Bay SAC (illustrated; Source: Jim Hurley SWC Promotions).

HH3 - Wet Heath

Annex I habitat (4010) under the EU Habitats Directive. Wet heaths include vegetation with at least 25% cover of dwarf shrubs such as Ling Heather, on peaty soils and shallow wet peats that typically have an average depth of 15-50 cm (where deeper peat deposits occur the habitat is usually classified as bog). Wet heath can occur in upland and lowland areas and is widespread

on the lower slopes of hills and mountains that are either too dry or too steep for deep peat accumulation.

Wet heath can grade into, or form intimate mosaics with upland blanket bog, or lowland blanket bog with minor changes in slope and topography. Wet heath is typically dominated by Ling Heather (*Calluna vulgaris*) and Cross-leaved Heath (*Erica tetralix*), or by Purple Moor-grass (*Molinia caerulea*) and/or Sedges. Moss and Lichen cover may be high in areas of undamaged wet heath. Wet heaths and adjacent blanket bog areas support a number of EU protected species including Red Grouse, Curlew, Golden Plover and Hen Harrier.

Reclamation, afforestation,burning, and wind farm development have resulted in extensive loss of wet heath. Overstocking of land with sheep has also degraded large areas of the habitat, especially in western regions, through overgrazing and trampling. This has depleted heather and other plant cover and allowed invasion by non-heath species, or exposure of peat to severe erosion. Additionally, nitrogen depositions from agricultural activity that generate air pollution have recently been recognised as having a negative impact on this habitat. Futhermore, rises in temperature and decreases in precipitation arising from climate change is also acknowledged to be a potential future threat to this habitat type.

This habitat is frequent on upland areas in the north-western part of County Wexford in the Backstairs Mountains SAC and Forth Mountain pNHA (illustrated; Source: Google Street View).

PB1 - Raised bogs

Priority habitat (7110) and Annex I habitat (7120 & 7150) under the EU Habitats Directive.

Raised bogs are accumulations of deep acid peat (3-12 m) that originated in shallow lake basins or topographic depressions at the end of the last glaciation 10,000 years ago. The name is derived from the elevated surface, or dome, that develops as raised bogs grow upwards from the surface accumulating organic material; the domed effect is often exaggerated when the margins of a bog are damaged by turf cutting or drainage, and are drying out.

The surface of a relatively intact raised bog is typically wet, acid and deficient in plant nutrients (as bogs receive most of nutrients through rainfall), and supports specialised plant communities that are low in overall diversity. The vegetation is open and colourful *Sphagnum* mosses dominate the ground layer. Raised bogs are most abundant in the lowlands of central and mid-west Ireland.

Intact actively growing raised bog is extremely rare, having decreased in area by over 35% in the last 10 years. Ongoing deterioration of the hydrological conditions of raised bogs at current rates caused by peat

cutting, drainage, forestry and burning severely threatens the viability of the habitat at most locations in Ireland. Climate change is also considered to pose a threat to raised bog in the future.

This is a rare habitat type in Wexford, and to date has only been reported from Screen Hills SAC Wexford.

PB2 - Upland blanket bog

Blanket bog (7130) is listed on Annex I of the EU Habitats Directive. Examples of the habitat that are 'active' (actively accumulating peat) are listed as a priority habitat.

Upland blanket bog occurs on flat or gently sloping ground above 150 m and is widespread on hills and mountains throughout Ireland. The 150 m limit serves to distinguish upland from lowland blanket bog but is loosely applied. Peat depths vary and normally fall in the range of 1-2 m, but can be much deeper in pockets. Upland blanket bog can be extremely wet where it occurs on level terrain and may have surface drainage features that are typical of lowland blanket bog.

Blanket bog areas support a number of EU species including Irish Hare, Red Grouse, Curlew, Golden Plover and Hen Harrier.

Current pressures and threats include overstocking by grazing animals (especially sheep), peat erosion, drainage, burning, infrastructural developments (i.e. wind farms), and agricultural activities causing nitrogen deposition.

This habitat has only been reported from upland areas in the north-western part of County Wexford in the Backstairs Mountains SAC and Forth Mountain pNHA.

PB4 - Cutover bog

Depressions on peat substrates (found within cutover bog areas) are an Annex I habitat (7150) under the EU Habitats Directive that can occur in areas of cutover bog.

Cutover bog is a variable habitat, or complex of habitats, that can include mosaics of bare peat and re-vegetated areas with woodland, scrub, heath, fen and flush or grassland communities. It occurs where part or all of the original peat has been removed through turf cutting, by the traditional hand method or mechanically, for either domestic or commercial purposes.

The nature of the recolonising vegetation depends on numerous factors including the frequency and extent of disturbance, hydrology, the depth of peat remaining, and the nature and soil chemistry of the peat and the underlying rock or soil. Standing water is usually present in drains, pools or excavated hollows. Some large areas of cutover bog have been reclaimed as farmland or planted with trees, particularly conifers.

The full extent of cutover may be difficult to establish as it frequently grades into other marginal habitats or farmland.

The habitat is rare in County Wexford. Cutover usually surrounds industrially and traditionally cutover raised bogs. Examples of the habitat occur in the north and north-west of the county.

PF1 - Rich fen and flush

Alkaline (rich) fen is an Annex I habitat (7230) under the EU Habitats Directive. Saw sedge (*Cladium mariscus*) fen, a particular type of rich fen, is a priority habitat (7210) under the EU Habitats Directive.

Rich fen and flush are peat forming wetlands that receive mineral nutrients from sources other than rainfall, usually groundwater or flowing surface waters that are at least mildly base-rich or calcareous, and are usually found over areas of limestone bedrock. The substratum is waterlogged peat and this usually has a high mineral content.

Fens differ from bogs because they are less acidic and have relatively higher mineral levels. They are therefore able to support a much more diverse plant and animal community.

They occur in a variety of situations including valleys or depressions, valley head fens, within transition mire and tall reed beds, on the landward side of hard-water oligotrophic lakeshore communities, calcium-rich flush areas in blanket bogs, dune slack areas, fens adjacent to raised and blanket bogs, in turlough sites, depressions in limestone pavement and wet hollows in machair, and spring fed habitats including cliffs, and even saltmarsh.

Alkaline fen may also occur as a secondary regenerating habitat on mined out bog sites which have been excavated to the fen peat layer.

Vegetation is typically dominated by Black Bog-rush (*Schoenus nigricans*) and/or small to medium Sedges (grass like plants). Rich fen and flush can be important for orchids. A well-developed layer of brown moss is also characteristic. Rich fen are also important habitats insects and for a number of rare snail species.

Like most peatland types in Ireland, fens have declined in extent mostly as a result of activities such as peat mining, land abandonment (and associated succession), agricultural drainage, infilling, and fertiliser pollution and eutrophication. Only limited measures have been introduced to address these damaging activities, which are likely to have increased in severity since the 1990's.

The habitat occurs in County Wexford and is associated with lake, in floodplain areas and dune slacks, and has been recorded at Ballykelly Marsh pNHA, Ballyroe Fen and Lake pNHA and Boley Fen pNHA (illustrated; Source: Google Street View).

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PF2 - Poor fen and flush

Poor fen and flushes include peat-forming communities that are fed by groundwater or flowing surface waters that are acid. In most cases the substratum is acid peat which has a higher nutrient status than that of surrounding acid bogs. The vegetation of poor fens and flushes is typically dominated by sedges and extensive carpets of mosses, in particular, *Sphagnum* moss.

Poor fens occur in a variety of situations including areas flushed by moving water in upland and lowland blanket bogs, flushed depressions in grassland areas, cutover bogs and wet heath areas. Like most peatland types in Ireland, poor fens have declined in extent mostly as a result of activities such as peat cutting and mining, afforestation, agricultural drainage, infilling, and fertiliser pollution and eutrophication.

The habitat is commonly associated with the wetter areas on upland bogs and wet heaths in County Wexford, such as in the Blackstairs Mountains SAC, Co. Wexford (illustrated; Source: Google Street View).

PF3 - Transition mire & quaking bog

Annex I habitat (7140) under the EU Habitats Directive. Transition mires and quaking bogs are peat-forming communities developed at the surface of waters with little or moderate amounts of nutrients, with characteristics intermediate between rich (alkaline) and poor (acidic) fen types. For this reason, they are considered as a separate habitat but they may occur within, or on the fringes of other peat-forming systems.

They present a large and diverse range of plant communities. In large peaty systems, the most prominent communities are swaying swards, floating carpets or quaking mires formed by medium-sized or small Sedges, associated with Sphagnum or brown mosses.

Transition mires and quaking bogs are usually associated with the wettest parts of a bog or fen and can be found in wet hollows, infilling depressions, or at the transition to areas of open water. The vegetation frequently forms a floating mat or surface scraw over saturated, spongy or quaking peat. Standing water may occur in pools or along seepage zones. The vegetation typically comprises species that are characteristic of bog, fen and open water habitats.

In some cases the mire occupies a physically transitional location between bog and fen vegetation, for example on the margin of a raised bog, or may be associated with valleys or basins.

The main pressures listed for transition mires are afforestation, water pollution, drainage, and hydrological changes. Grazing and agricultural land use are also prominent issues with regards to pressures on this habitat type.

The habitat is occasional in County Wexford on former bogs and on the margins of small lakes. It has been reported from the Screen Hills SAC.

WN4 - Wet pedunculate oak-ash woodland

Priority habitat (91E0) under the EU Habitats Directive.

This type of woodland is associated with areas that are flooded or waterlogged in winter but which dry out in summer. It occurs on periodically-flooded alluvial sites that are well above the limits of regular inundation, and on drumlins and other sites with heavy, poorly-drained clay soils that are subject to waterlogging.

The woodland is dominated by Pedunculate Oak (*Quercus robur*) and/or Ash (*Fraxinus excelsior*), with other common components including Alder (*Alnus glutinosa*), Willows (*Salix* spp.) can be locally abundant.

When flooding subsides in alluvial sites, exposed channels and depressions may remain wet or waterlogged.

The area of alluvial forests has declined in Ireland and this, taken together with their fragmented nature, abundance of alien invasive species and sub-optimal grazing regimes and drainage continues to threaten the habitat.

This habitat is rare in the County Wexford and has been reported from just one site at Kildavin Lower Wet Woodland in Co. Wexford.

WN5 - Riparian woodland

This can correspond to priority habitat (91E0) under the EU Habitats Directive.

Riparian woodlands are wet woodland habitats of river margins (gallery woodland) and low islands that are subject to frequent flooding, or where water levels fluctuate as a result of tidal movement (in the lower reaches of rivers).

Riparian woodland is dominated by stands of Willows that may include native and non-native species. Alder (*Alnus glutinosa*) is occasional. Stands of Reed Canary-grass (*Phalaris arundinacea*) are common. Indian Balsam (*Impatiens glandulifera*), an introduced species, is locally abundant. These woodlands often reveal an accumulation of river borne debris, including dead vegetation and plastic, when water levels are low. A fine coating of grey mud on vegetation and tree bases that are regularly submerged and immersed is also characteristic.

Their fragmented nature, abundance of alien invasive species and sub-optimal grazing regimes and drainage continues to threaten the habitat.

The habitat is rare in County Wexford, and is found at Litterbeg Wet Woodland near Kilmuckridge.

WN6 – Wet willow-alder-ash woodland

Some example of this habitat can correspond with priority habitat (91E0) under the EU Habitats Directive.

Includes woodlands of permanently waterlogged sites that are dominated by willows (*Salix* spp.), Alder (*Alnus glutinosa*) or Ash (*Fraxinus excelsior*), or by various combinations of some or all of these trees.

It includes woodlands of lake shores, stagnant waters and fens, known as carr, in addition to woodlands of spring-fed or flushed sites. Carr occurs on organic soils and fen peats that are subject to seasonal flooding but remain waterlogged even when flood waters recede.

As the area of fen has declined so has the area of wet woodland, mostly as a result of activities such as peat cutting and mining, conifer afforestation, agricultural drainage and reclamation, infilling, and fertiliser pollution from adjacent farmland. Although drainage of fens may in some cases have led to a local short term increase in the cover of wet woodland in some areas.

This is likely to be the most common wet woodland type in County Wexford. Good examples of this habitat can be seen at many locations on the shores of many lakes and depressions where drainage is impeded. The habitat is recorded from Island House Wet Woodland and Ferrycarrig Heritage Park Wetlands, Co. Wexford (illustrated; Source: Ferrycarrig Heritage Park).

WN7 - Bog woodland

Priority habitat (91D0) under the EU Habitats Directive.

Woodlands found on intact ombrotrophic bogs (raised or blanket), bog margins and cutover bog. Bog woodland typically occurs on deep acid peat that is relatively well-drained in the upper layers and is commonly associated with former turf cutting activity or drainage or where internal raised bog drainage patterns allow the development of woodland stands (i.e. soak systems on bogs). It may also occur in areas of cutover bog where most of the peat has been removed. Downy Birch (*Betula pubescens*) is the usual dominant and may form pure stands. Willows (*Salix* spp.) may also occur.

A characteristic feature is the ground cover of *Sphagnum* moss species which often form deep carpets, usually with *Polytrichum* mosses and occasional Lichens. Bog woodlands are closely associated with raised bogs, occurring either on intact bogs, on cutaway or on transition mires (transition between fen and bog). They are found mostly in the central and north midlands. Their total area is uncertain.

They are threatened by drainage, peat cutting, burning and development; although in the long term it is believed that they will expand as cutaway re-floods.

Drier (non-annex) examples of the habitat occurs at just one site in County Wexford, at Graiguebeg Bog Woodland. To date, the Annex I habitat Bog Woodland has not been recorded in Co. Wexford.

WS1 - Scrub

Scrub dominated by Juniper can correspond to Juniperus communis formations on heaths or calcareous grassland are Annex I habitat (5130) under the EU Habitats Directive.

Found on a variety of habitat types, scrub includes areas that are dominated by at least 50% cover of shrubs (e.g. gorse, willow etc.), stunted trees or brambles. The canopy height is generally less than 5 m, or 4 m in the case of wetland areas.

Scrub frequently develops as a precursor to woodland and is often found in inaccessible locations, or on abandoned or marginal farmland. In the absence of grazing and mowing, scrub can expand to replace grassland or heath vegetation. Trees are included as components of scrub if their growth is stunted as a result of exposure, poor soils or water-logging. If tall trees are present, these should have a scattered distribution and should not form a distinct canopy.

This habitat is common throughout County Wexford on the edges / or invading the centre of many of the wetland sites particularly when impacted by drainage, such as at Coolteen Wetland cNHA (illustrated; Source: Google Street View).

CW1 - Lagoons and saline lakes

Priority habitat (1150) under the EU Habitats Directive.

Coastal lagoons are enclosed bodies of standing brackish water that are wholly or partially separated from the sea by banks of sand, shingle or rock, or by land barriers of rock or peat. Tidal influence is much reduced by these physical barriers or is totally absent.

Salinity (the salt content of the water) is highly variable both within and between different lagoonal systems. It fluctuates on a daily and seasonal basis, depending on tides and inputs of freshwater or salt water following storms and, in some situations, may exhibit the full range from sea water to freshwater conditions. Water levels in lagoons generally undergo seasonal fluctuations (high in winter and low in summer) unless strictly controlled by pumping. Strong water currents are absent and this is a key feature which distinguishes lagoons from other marine water bodies.

In addition to typical sedimentary lagoons, this habitat may also occur where brackish waters has become impounded behind artificial barriers (usually as a result of construction), coastal lakes with natural outlets to the sea that experience some tidal exchange at high tide or during storm conditions, and other lakes that are isolated from the sea but which are slightly saline as a result of percolation of sea water or inputs from salt spray and storm waves or surges.

The most damaging activity has been deliberate drainage of the largest lagoon for agricultural reasons. Further loss of habitat has occurred as a result of natural silting-up. The quality of the habitat has been impacted by water pollution in the form of excessive nutrient enrichment mostly from agricultural sources, but also due to domestic effluents due to an increase in urbanization, commercial and industrial activities adjacent to lagoons.

Examples of this habitat are known to occur in County Waterford at coastal sites such as Lady's Island Lake SAC and Tacumshin Lake SAC (illustrated; Photograph: Peter Foss).

CW2 - Tidal Rivers

Annex 1 habitat (1130) under the EU Habitats Directive. This category should be used for the lower reaches of rivers or streams, and any artificial watercourses, that are tidal and where there are regular fluctuations in salinity and turbidity, and in the rate and direction of water flow.

The lower limit of a tidal river is defined as the point where the channel begins to widen as it enters the sea or estuary (the mouth of the river). The seaward extensions of tidal rivers should be considered under the appropriate marine littoral or sublittoral category on the basis of vertical zonation and substratum type.

The lower reaches of many of the counties larger rivers correspond to this habitat type.

CD 5 - Dune slacks

Annex 1 habitat (2170 & 2190) under the EU Habitats Directive.

Dune slacks are nutrient-enriched wet areas that occur in hollows or depressions either behind or between dune ridges, or in blow-outs in sand dunes. The water table is either at, or close to the surface for much of the year and dune slacks may or may not dry out in summer.

Vegetation typically comprises Creeping Willow (*Salix repens*), Common Reed (*Phragmites australis*), Sedges, Rushes and broadleaved wetland herbs. A range of orchids are common found. Dune slacks that remain permanently wet are characterised by Mare's-tail (*Hippuris vulgaris*) and Water Horsetail (*Equisetum fluviatile*).

This habitat is under serious threat from a range of impacts including overgrazing, undergrazing, over-stabilisation of dunes, invasive non-native species, water abstraction and drainage, golf course developments, agricultural intensification and forestry and coastal protection works.

The habitat occurs at a number of coastal dune sites in the County Wexford, such as Ballyteige Burrows SAC, Curracloe and Raven Point Nature Reserve.

CM1 - Lower salt marsh

Annex 1 habitat (1310, 1320, 1330 & 1420) under the EU Habitats Directive.

Lower salt marsh is subject to more prolonged submersion by sea water and is more strongly saline than upper salt marsh - CM2. As a result it is characterised by a predominance of halophytes, or salt-tolerant plants.

Common Saltmarsh-grass (*Puccinellia maritima*) usually dominates the seaward edge of the salt marsh and often forms a short turf with glassworts (*Salicornia* spp.). Dense stands of cord-grasses (*Spartina* spp.), introduced perennials, or glassworts (*Salicornia* spp.) may also occur at the lower limit of the salt marsh in some places. Further inland, Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*) and Sea Arrowgrass (*Triglochin maritima*) are prominent in the vegetation and may occur together with Common Saltmarsh-grass (*Puccinellia maritima*) and Sea Aster (*Aster tripolium*). Lower salt marsh includes the typical 'middle marsh' communities (swards of *Armeria maritima* and *Plantago maritima*) of the east coast of Ireland.

In contrast to upper salt marsh - CM2, there is little or no cover of rushes. Some regional differences in species composition are apparent around the Irish coast, e.g. Sea-purslane (*Halimione portulacoides*) and Lax-flowered Sea-lavender (*Limonium humile*) are locally abundant in the east and south, and rare or absent in the north and west.

This habitat is under serious threat from a range of impacts including overgrazing, undergrazing, over-stabilisation of dunes, water abstraction and drainage, golf course developments, forestry and coastal protection works.

The habitat occurs at a number of coastal dune sites in the County Wexford, such as at Tacumshin Lake (illustrated).

CM 2 - Upper salt marsh

Annex 1 habitat (1330 & 1410) under the EU Habitats Directive. Upper salt marsh is subject to less frequent and less prolonged inundation by the sea and, as a result, is not as saline in character as lower salt marsh - CM1.

Vegetation is typically dominated by rushes (particularly *Juncus maritimus* and *J. gerardii*) and Red Fescue (*Festuca rubra*). Creeping Bent (*Agrostis stolonifera*) may be locally abundant in more waterlogged areas. Upper salt marsh supports some species that also occur in lower salt marsh - CM1. Examples include Common Scurvygrass (*Cochlearia officinalis*), Sea Aster (*Aster tripolium*) and Sea Plantain (*Plantago maritima*). Upper salt marsh differs from lower salt marsh - CM1 in that grasses and rushes are abundant, and species that are characteristic of freshwater conditions are also present in the former, including Lesser Hawkbit (*Leontodon taraxacoides*), Marsh Arrowgrass (*Triglochin palustris*) and, on western coasts, Parsley Water-dropwort (*Oenanthe lachenalii*).

This habitat is under serious threat from a range of impacts including overgrazing, undergrazing, over-stabilisation of dunes, water abstraction and drainage, golf course developments, forestry and coastal protection works.

The habitat occurs at a number of coastal dune sites in the County Wexford, such as Ballyteige Marsh pNHA and Barrow Salt Meadows (illustrated; Photograph: Google Street View).

3.2 Protection of Wetlands in Wexford

Due to their recognised ecological importance, a significant number of wetland sites in County Wexford are offered legislative protection under various site conservation designations. The main nature conservation designations that afford protection to wetland sites in County Wexford are summarised below.

The distribution of wetland sites in relation to areas designated for nature conservation is presented in Figure 8. The number of designated nature conservation areas and associated number of wetland sites are presented in Table 4 below.

Table 4: Number of wetland sites (main sites and sub-sites) occurring within designated areas.

Conservation Designation	Protected Status	Number of sites and sub-sites located within designated areas
NP - National Park	**Protected**	0
NHA - Natural Heritage Area	**Protected**	0
pNHA - proposed Natural Heritage Area	Partially Protected	20
cNHA – candidate Natural Heritage Area	Not Protected	5
SAC - Special Area of Conservation	**Protected**	21
SPA - Special Protection Area	**Protected**	10
NNR - National Nature Reserve	**Protected**	3
Undesignated sites	Not protected	324

Notes: Data on the current number of sites designated as NNR, NHA, SAC and SPA is based on data available from NPWS website dated June 2022.

NP – National Park

National parks are defined as areas where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest or which contain a natural landscape of great beauty (NPWS 2014). There are no National Parks in County Wexford.

NNR - National Nature Reserve

National Nature Reserves are areas set aside for their conservation value by the Minister for the Department of Environment, Heritage and Local Government. These sites are usually State owned, in cases where these areas are privately owned, land-owners enter into a management agreement with the National Parks and Wildlife Service.

Raven Point Nature Reserve is one of the three sites designated as a Nature Reserve in County Wexford.

SAC – Special Area of Conservation

Special Areas of Conservation (SACs) have been selected from the prime examples of wildlife conservation areas in Ireland. The legal basis from which selection is derived from the EU Habitats Directive (92/43/EEC of the 21st May 1992) (CEC 1992). SACs that are still undergoing the formal designation process are referred to as “candidate Special Areas of Conservation” or cSACs. Actions that may affect the ecological integrity of sites are not to be permitted except in circumstances of overriding public interest or safety. Land-owners require permission from the Minister of the Environment to carry out certain ‘Activities Requiring Consent (ARCs)’ such as drainage or fertiliser application, depending on the habitats / species in question.

River Barrow and River Nore SAC and Screen Hills SAC are two of 15 wetland sites (main sites) located within areas designated as SACs in County Wexford (see Appendix 3 for a list of these sites).

SPA - Special Protection Area

Special Protection Areas (SPAs) for Birds are areas which have been designated to ensure the conservation of certain categories of birds. Ireland is required to conserve the habitats of two categories of wild birds under the European Birds Directive (Council Directive 79/409/EEC of the 2nd April 1979) (CEC 1979).

Saltee Islands SPA and Ballyteige Burrow SPA are two of 9 wetland sites (main sites) located within areas designated as SPAs in County Wexford (see Appendix 3 for a list of these sites).

NHA – Natural Heritage Area

The basic designation for wildlife conservation is the Natural Heritage Area (NHA). This refers to an area considered important in a national context for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation. The protection afforded to Natural Heritage Areas is similar to that afforded to Special Areas of Conservation as described above. To date only raised bogs and blanket bogs have been designated as NHAs.

There are no areas designated as NHAs in County Wexford.

pNHA - proposed Natural Heritage Areas

Proposed Natural Heritage Areas (pNHA) were published on a **non-statutory** basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats although a resurvey is urgently required to determine their current ecological value.

Nationally pNHAs cover approximately 65,000 ha and NPWS has indicated that designation will proceed on a phased basis over the coming years (NPWS 2014). Prior to statutory designation, pNHAs are subject to limited protection being considered in afforestation grants, REPS and recognition by planning authorities.

Within County Wexford a total of 15 wetland sites (main sites) are listed as occurring within areas listed as pNHAs (see Appendix 3 for a list of these sites) including Ballykelly Marsh pNHA and Kilgorman River Marsh pNHA.

cNHA – candidate Natural Heritage Area

Candidate Natural Heritage Areas (cNHAs) is the name given to wildlife sites that are proposed by NPWS and by third parties for consideration as NHAs. Included within this category are the pNHAs described above, together with newly discovered sites recommended for conservation by a variety of third parties. These sites are likely to be of importance for wildlife and habitats. Prior to designation these sites will require further detailed survey and evaluation for their conservation value. If they are considered of national conservation value they may then enter the formal NHA designation process. The cNHA sites have no legal protection until they are taken up into the formal NHA designation process; unless they are also pNHA (see above).

Kilcoraal Fen and Coolteen Wetland in County Wexford are two of the 4 wetland sites (main sites) listed as occurring within areas listed as cNHAs (see Appendix 3 for a list of these sites).

4 Wexford Wetland Survey 2019

4.1 Introduction

The aim of the WXWS 2022 project was to determine the location and approximate extent of wetlands in County Wexford. The process of identifying wetlands involved a two phase approach as follows:

I. a **desktop literature review** to identify all known wetlands (from published sources and known to groups and individuals) and gather background data on these sites (see Appendix 1); and

II. a **desktop analysis of Aerial Photography and other GIS datasets** to identify and document potential wetlands which had not been previously reported.

Where data existed and for sites surveyed recently, the sites were ranked in terms of their conservation/ecological importance (see NRA Site Evaluation Criteria in Appendix 4) to assist Wexford County Council in its obligations to protect the most important wetlands within the county and to inform future conservation policies in relation to the wetland resources in the county.

All survey data recorded during the 2022 project are held in the *WXWS Site database*, and associated *WXWS GIS dataset* which should help guide spatial planning and development management by Wexford County Council.

4.2 Materials & Methods

As outlined above, the WXWS 2022 comprised a comprehensive desktop study aimed at identifying the entire wetland resource of County Wexford and documenting it in a *Site database* and associated GIS.

4.2.1 Wexford Wetland Survey 2022 - Desktop Study

The methodology employed during the course of the study is illustrated in Figure 7 below. The main stages involved were: data acquisition; design and set-up of Site database and GIS datasets; site identification and background research; data entry (and mapping) and data transfer between databases; data analysis and result presentation.

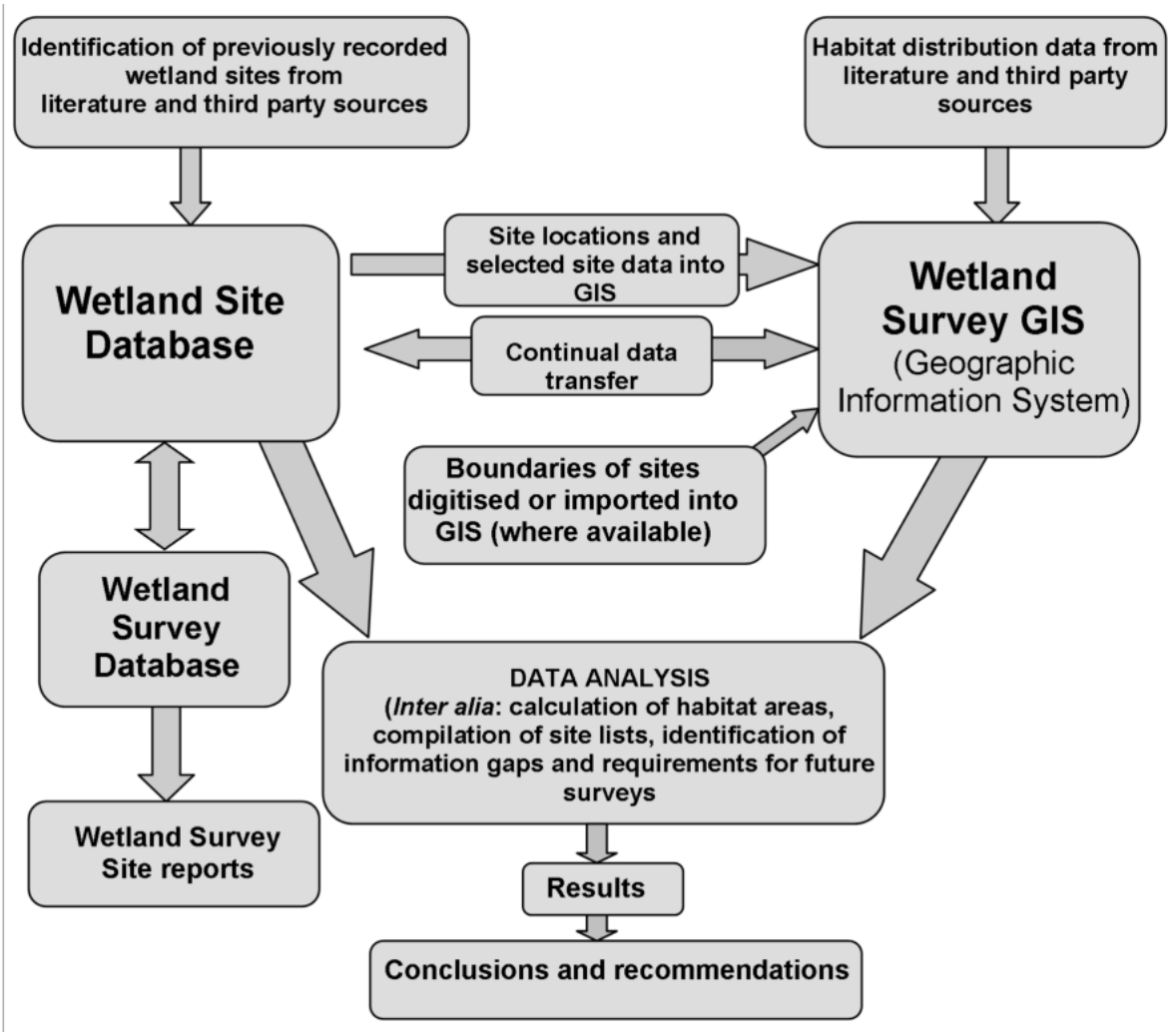

Figure 7: Flow chart illustrating the various steps undertaken during the course of the Wexford Wetland Survey (WXWS) project 2022.

4.2.1.1 Data acquisition

The first stage of the WXWS 2022 involved identifying potential wetland site data sources which included published literature, unpublished reports, scientific publications, digital data-sets, and information held by state agencies, and non-governmental organisations. Data sources that were consulted during the project are listed in Appendix 1.

The relevant data was held in a variety of formats including GIS datasets, habitat and site records in databases and spreadsheets, and in published reports, surveys and scientific publications.

4.2.1.2 WXWS Site databases – structure and content

A *Site database* was created at the outset of this project for County Wexford to hold and manage data on the wetland sites recorded during the study. The database was created in Filemaker Pro Version 12.0 which runs on both PC and Mac platforms. Site information from the database is readily exported to Microsoft Excel format.

In summary, the main core *Site database* holds information including: site name and code, site provenance, size (area in ha), third party site name and code, national grid reference, site conservation designations, habitat information on the specific wetland vegetation type(s) present (and extent where available),

information on rare species of note, a list of published reports holding information on the site and the nature of same, and a site description.

This information is stored in the *Site database* within a series of database fields thus enabling searches, data-examination and creation of site lists during the data analysis stage of the study. An overview of the data fields and database structure used to record information in the *Site database* is provided in Appendix 2.

4.2.1.3 WXWS Literature review – site identification

On project commencement an extensive literature review was carried out with the aim of identifying previously reported wetland sites throughout County Wexford. During the data and literature review each new site found to contain, or believed to contain one or more of the 38 wetland habitat types being recorded in this study, was added to the *Site database*, or in some cases where a site record already existed additional site information was added. Basic site data (county, grid reference etc.) and data relating to the occurrence and extent of one or more of the wetland types was entered into the database for each new site added.

Where more than one individual site occurred within a larger NHA or SAC complex, a record was created for both the site complex (the main site) and the individual sub-sites within the main site (see Appendix 2 for further details).

Further information on the data recorded in the *Site database* is presented in Appendix 2.

4.2.1.4 WXWS GIS datasets – structure and content

The *GIS Dataset* (created using ESRI ArcView 10.6.1 GIS software package) holds site related information on each polygon, point, or linear feature mapped. A detailed explanation of the various GIS files and associated attribute fields is presented in Appendix 2 and on the 'readme' file in the folder containing the GIS files with the project deliverables (see Appendix 6).

The shapefiles created during the project were converted into MapInfo format for use by Wexford County Council. Both ArcGIS and MapInfo versions of the final GIS files are included with the project deliverables. A summary description of the various files that make up the GIS is presented below.

Two different GIS shapefiles relating to the distribution and extent of freshwater wetland habitats were produced as summarised in Table 5 below.

A third party dataset available from the EPA is available to show the distribution of linear watercourses within the county. This dataset could be incorporated into further revisions to the Wexford Wetland Survey GIS to show the distribution of canals (FW5), upland rivers (FW1), and lowland rivers (FW2).

In addition, there are a range of other third party habitat datasets available that could be incorporated into the GIS to further inform the wetland resource in Wexford. Examples of these datasets include; Raised Bog Monitoring Project mapping (NPWS), Coillte biodiversity area mapping, National Survey of Native Woodlands, and the National Survey of Semi-natural Grasslands.

Table 5: GIS files produced during the WXWS 2022.

File Name	Description
WXWS 2022 Site Locations	This file shows point locations of all wetland sites identified during the 2022survey.
WXWS 2022 Site Boundaries	This file shows the boundaries of a selection of sites identified during the study. This file requires updating with any future county wetland survey, as boundaries drawn are an estimate of site extent.

4.2.1.5 WXWS GIS - Site Identification

ArcView 10.6.1 GIS software package on a Windows Operating System was used throughout the WXWS 2022 for all mapping purposes. During the same period as the site database was being developed, GIS data-sources were incorporated into the county *GIS* datasets. Following the acquisition of the relevant base-maps and aerial photography from Wexford County Council, other data-sets were added as they became available (see Appendix 1 for list of all GIS datasets used during the WXWS). See Appendix 2 for further details of methodology employed in compiling the GIS.

The county was systematically surveyed on a 10km x 10km basis using the OS series of 6 Inch Maps in combination with colour aerial photography (Ordnance Survey of Ireland, 2010 series), the subsoils map, and other relevant GIS datasets. As new sites were identified, a new site record was created in the *Site Locations* (point) GIS file. An approximate boundary based on pre-existing designations or interpretation of aerial imagery was drawn for each site. Due to project constraints, habitat polygons were not drawn for wetland sites. Following this a site name was applied (usually the townland where site occurs), and grid co-ordinates recorded. This information was subsequently exported to the *Site database*.

In general, it is relatively straight-forward to identify wetlands from non-wetland habitats based on aerial photography in combination with six inch mapping, the parent material (sub-soil) dataset, and topographical mapping. Digitising was undertaken at a scale of 1:2000 and the feature being digitised either traced an underlying vector or followed the centre of the feature in the underlying raster (usually either aerial photography or Orthos).

It is important to note that analysis of aerial photography is a relatively crude exercise and should not be used for any more than identifying 'potential' wetland types. Habitats can only be assigned (especially to level 3 of Fossitt) by field survey and ground-truthing.

4.2.1.6 Data Transfer and Mapping of sites from the Site database

The sites identified from the literature review were exported from the *Site database* and imported into the GIS as individual points by using the grid co-ordinates reported in the literature. Each of the sites was examined in the GIS and the precise location confirmed.

4.2.2 Study Constraints and Limitations

The main output from this study is the production of a preliminary inventory of wetlands for County Wexford.

A number of difficulties and limitations with respect to the compilation of the WXWS list of wetland sites were encountered, which the reader should be aware of, before interpretation of the data is undertaken

and to provide an estimate of the level of confidence that can be applied to the data from the current study.

4.2.2.1 Wetland site identification

Although every effort was made to compile a complete map of all potential wetland sites in County Wexford, it is possible that additional smaller wetland sites do occur which have not been mapped within the *GIS* or listed in the *Site database*. Therefore the list of sites presented in the GIS and accompanying database should not be regarded as definitive.

4.2.2.2 Wetland boundary mapping

The data-sets which contributed to the site boundaries came from a variety of sources (as recorded within GIS). This has meant that it is of varying quality. Some of the data originates from detailed field surveys while other data may originate from interpretation of sub-soils, aerial photography, or six inch mapping. Therefore, it must be emphasised that the boundary data should be treated with care and used only as an indicative map of wetland distribution. The methodology and scales used when digitising also varies across datasets.

It is foreseen that the wetland boundaries will be refined following field surveys. Coupled with this, a review of all sites should be undertaken with a view to carrying out field surveys at those sites likely to be of highest ecological importance.

4.3 Results

4.3.1 WXWS 2022 – Desktop Study

4.3.1.1 Site Databases

The *Site database* version 1.0 holds information on 367 wetland sites (359 main sites and 8 sub-sites) in County Wexford.

The project deliverables accompanying this report includes a copy of th*e WXWS Site database* in both Filemaker Pro and Microsoft Excel formats (see Appendix 6).

A list of all the wetland sites recorded in the *WXWS Site databases* are provided in Appendix 3 in this report together with a map book showing their location and extent.

A complete export of information held on the site records in the *WXWS Site databases* are provided in a separate Excel spreadsheet file (WXWS 2022_total_site_list.xls) included with the project deliverables.

4.3.1.2 GIS Databases

Point locations of all 388 wetland sites (main sites and sub-sites) in County Wexford are included in the site location datasets (WXWS Site Locations).

Boundaries of all 367 main sites in County Wexford are included in the site boundary shapefiles (WXWS Site Boundaries). Sub-sites occur within these main site areas.

The *WXWS GIS* includes two individual ESRI shape-files and equivalent MapInfo Tab files. These are summarised in 4.2.1.4 above and further details are presented in Appendix 2. Copies of these files are included with the project deliverables (see Appendix 4).

4.3.1.3 Distribution and extent of wetlands in County Wexford

As outlined above, a total of 367 wetland sites have been identified in Wexford. Maps showing the distribution and extent of these sites is presented in Figure 8. A map showing the location of these sites in relation to designated sites is presented shown in Figure 9. From these maps, it can be seen that there is a higher density of wetland sites in the southern part of the county (associated with poorly drained inter-drumlin depressions). The majority of wetland sites lie outside of designated areas.

The sub-soils (or parent material) map of Ireland was used as a primary source in identifying areas of potential wetland within the county. Based on analysis of the sub-soil types that indicate wetland areas, the total area of wetland within Wexford is estimated to be up to 15,344ha or 6.48% of the county. While an indication of the original extent of wetlands, this approximation is certainly an over estimate as it does not take account of changes due to land management or drainage.

During the WXWS, preliminary site boundaries were drawn for wetland sites in the county which occur outside of NPWS designated sites. The boundaries were mapped using information available from third parties and by interpretation of aerial imagery and other datasets. The extent of main wetland sites mapped in County Wexford was 2,540ha, representing 1.07% of land area (Figure 8). This includes areas of coastal wetlands, wet grassland, lakes, swamp, fen and wet woodland. A further 13,349ha (5.64% of land area) of NPWS designated sites occur in the county. However, there are significant areas of dry-land habitat also present within some of these site boundaries where they occur in close association with wetland habitats. In order to determine the an accurate estimate of wetland extent in the county field surveys are required.

A preliminary review of available third party habitat datasets suggests that good quality data only exists for a small selection of habitats that have been subject to detailed field survey (such as the larger intact raised bogs, wet woodlands and grasslands). Other habitats such as fens, marshes, and turloughs have not been the subject of systematic survey and therefore data quality is poor. There is a lack of detailed habitat data available for extensive parts of Wexford, particularly the southern part of the county.

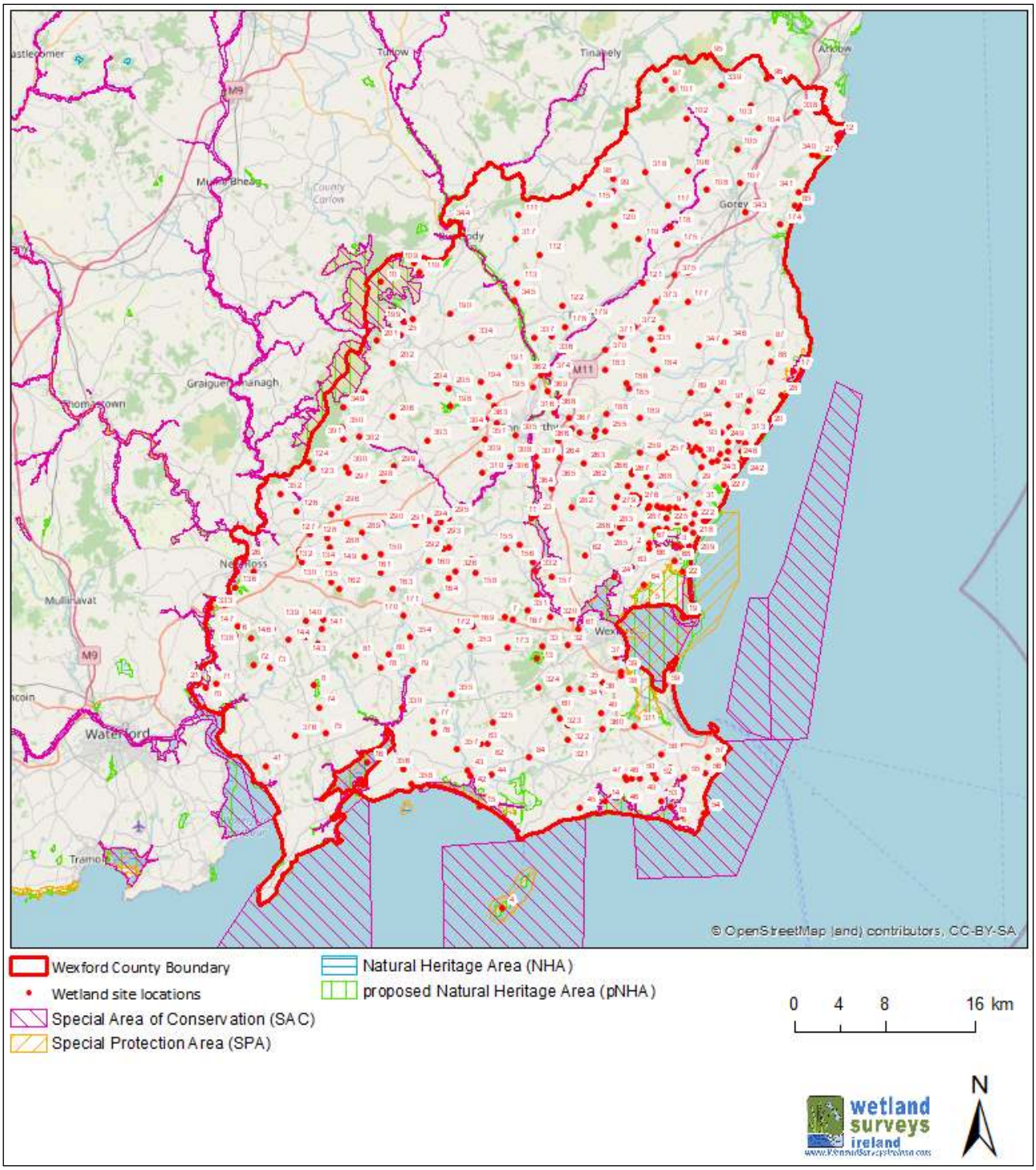

Figure 8: Map showing the location and extent of wetland sites in county Wexford, labelled according to WXWS site code. (see Appendix 3 which presents this map at a larger scale in the form of a map book).

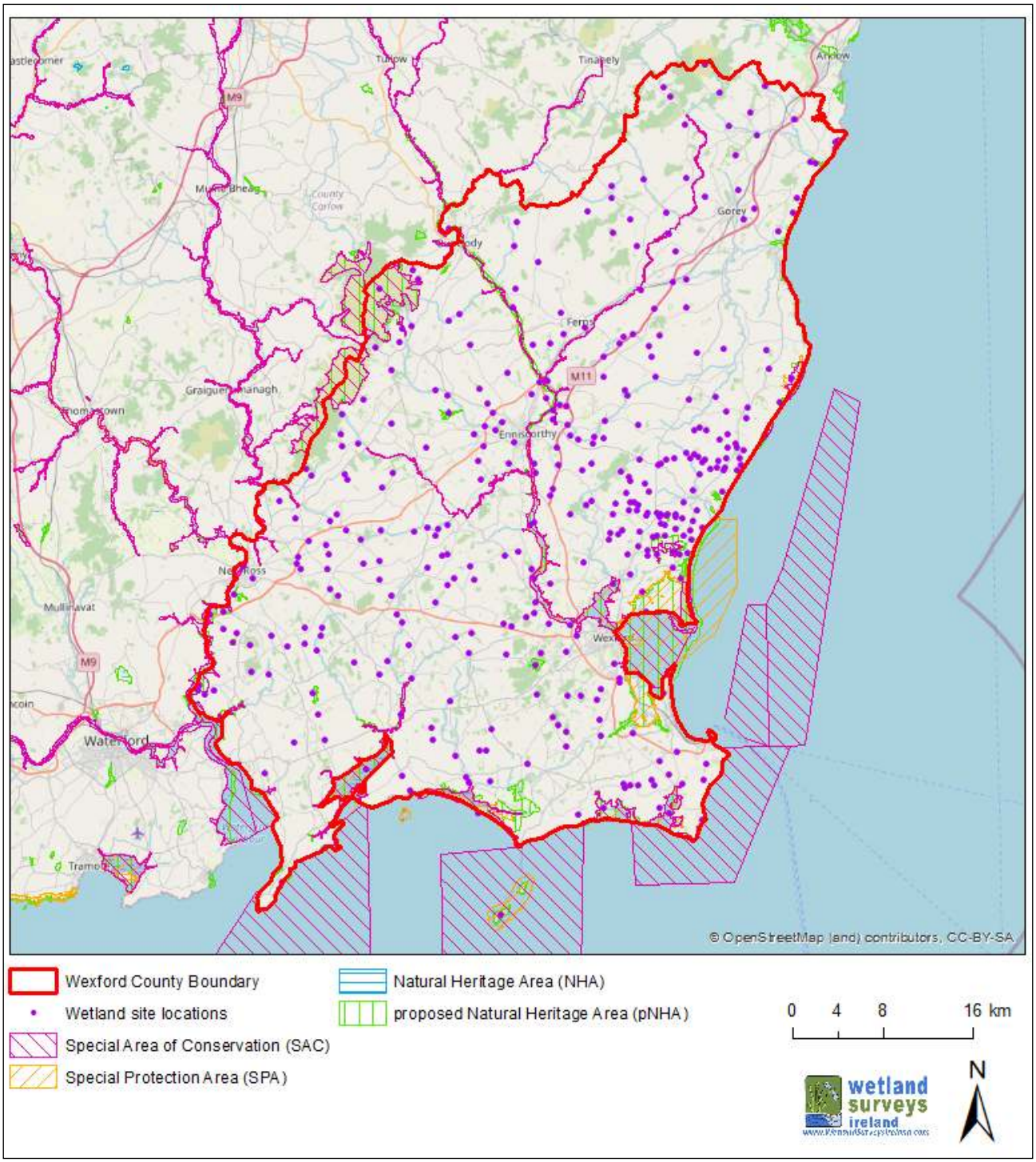

Figure 9: Location of identified wetland sites (stored within Site database & GIS) in relation to areas designated for nature conservation in County Wexford.

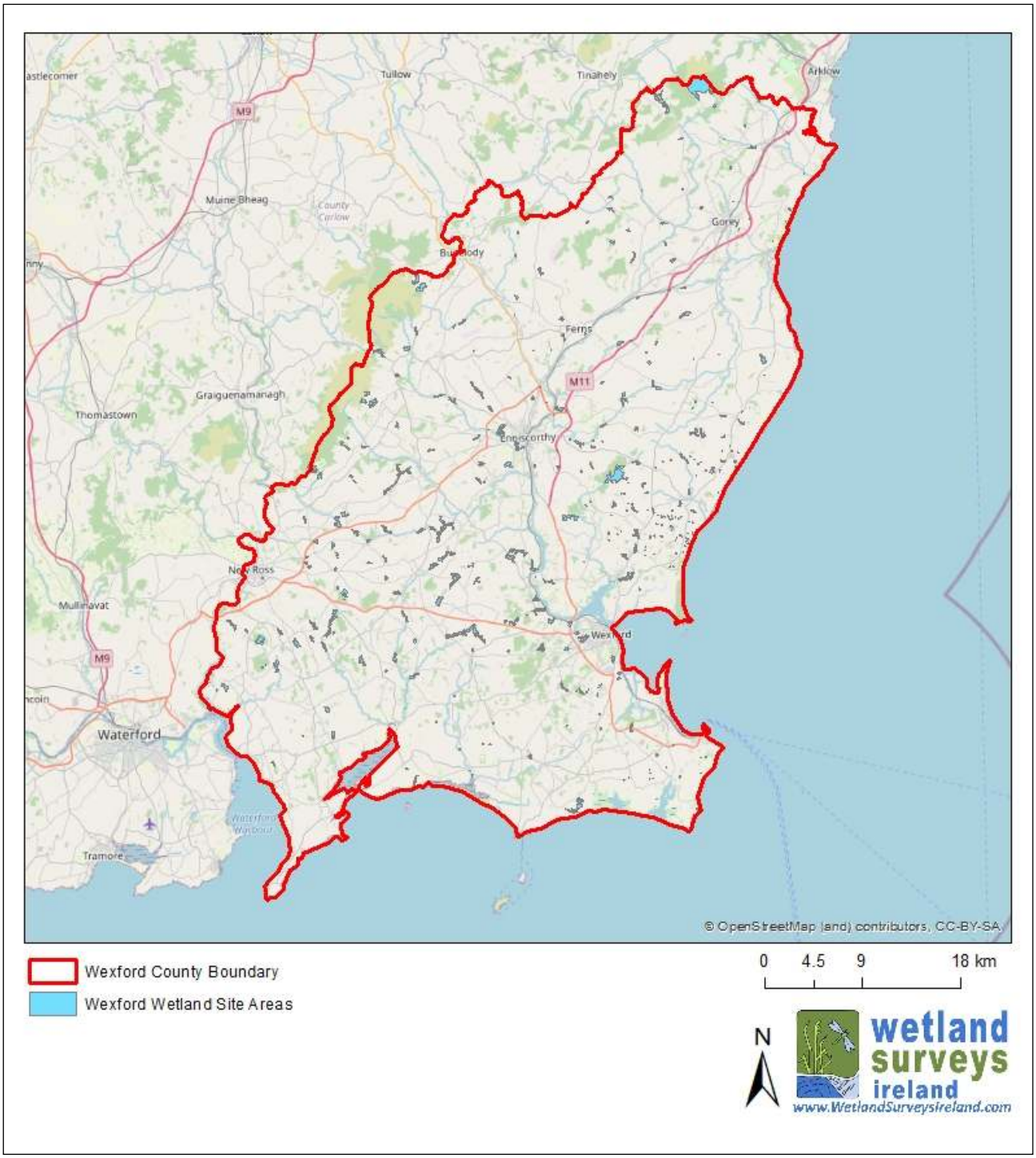

Figure 10: Map showing the extent of wetland sites identified in county Wexford during the current study.

4.3.1.4 Wetland site conservation evaluation

As discussed in Section 0 above, few wetland sites in Wexford are offered legislative protection under either national and / or international site conservation designation schemes. 324 wetland sites identified during the current survey lie outside of areas designated for nature conservation.

Within the *Site database* information on conservation designations or status of sites was recorded in relation to the following conservation categories:

NHA - Natural Heritage Area with legal protection
cNHA - candidate Natural Heritage Area - no legal protection
pNHA - proposed Natural Heritage Area as advertised in 1995 - some legal protection
SAC - Special Area of Conservation with legal protection
cSAC - candidate Special Area of Conservation open to appeal/ transmitted to EU
pcSAC - proposed candidate Special Area of Conservation open to appeal/ not yet transmitted to EU
SPA - Special Protection Area with legal protection
cSPA - candidate Special Protection Area
NP - National Park with legal protection
WHS - World Heritage Site
NNR - National Nature Reserve with legal protection
BIO - Unesco Biosphere Reserve
RAM - Ramsar Site
ESA - Environmentally Sensitive Area
EDS - Eurodiploma Site
ASI - Area of Scientific Interest
BGR - Berne Convention Biogenetic Reserve
COR - Corine site
WS - Wildfowl Sanctuary
RFF - Refuge for Flora or Fauna
CBA - Coillte Biodiversity Area
CFP - Coillte Forest Park
SGI – Sites of Geological Interest
LOP – Local Auhtority Park
OPW – OPW Managed Park
PNR – Private Nature Reserve
Undesignated site - no known designation

The number of sites listed in the *Site database* with a nature conservation designation and the degree of protection offered are summarised in section 3 above. A list of all 367 wetland sites (main sites and sub-sites) recorded in the *Site database* and the specific conservation designations on each site is provided in Appendix 3 of this report (the Excel version of this spreadsheet is included with the project deliverables). Figure 9 above shows the location of all 367 WXWS sites (main sites and sub-sites) in relation to designated sites.

In the WXWS 2022 sites were given an indicative conservation ranking based on their conservation/ecological importance as defined by the NRA 2009 scheme (see NRA Site Evaluation Criteria in Appendix 4). Site indicative conservation rankings for wetland sites in Wexford are presented in Appendix 5.

4.3.1.5 Damage to wetlands

The majority of, if not all, Irish wetland sites, and by extension those in County Wexford, have been subject to some degree of human impact, damage or modification from their natural state in the past, and continue to be threatened and are in decline due to such activities (Foss and Crushell 2007).

Wetlands, (bog and fen areas in particular) have historically been regarded as less productive than adjacent agricultural land and measures have been taken to 'improve' their quality for agriculture. The principal method of land improvement conversion usually involved some form of drainage, creation of barriers to prevent flooding, burning or the addition of nutrients so as to either facilitate the removal of peat, the planting of trees, or the creation of new grazing areas, pasture or farmland.

It is likely that the information recorded in the *Site database* on site activities, impacts and damage represents a minimum, and that additional sites have been negatively affected by human operations which have not been documented in the *Site database*. The *Site database* does however provide a tool for recording such damage on sites in the future, and provides an indication of the types of activities which have affected wetland habitats to date.

Impacts and Activities influencing the conservation status of each site are recorded in the site database according to the EU Natura system. The original list supplied from the EU Commission has been modified slightly for use in Ireland by NPWS (Foss & Crushell 2008; D. Lynn, NPWS *pers comm.*).

The main impacts and activities and the wetland types most likely to be affected by these activities are summarised in Table 6. A review of the impacts and damage to wetlands in County Wexford is outside the scope of the current project but should be considered in any future analysis of the wetland resource in the county.

Table 6: Natura 2000 Impacts and Activities recorded on wetland sites as part of the WXWS 2022 which are likely to have a negative effect on wetlands and the wetland type most likely to be affected by these activities.

Natura 2000 Impacts and Activities Main Code	Natura 2000 Impacts and Activities Category with brief description	Broad Wetland habitat types most at threat or likely to be affected from Impacts and Activities
A	**Agriculture** *Including cultivation, fertilisation, and over grazing*	Fens, Marsh, Bog, Wet heath, Reed Swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Rivers, Coastal wetlands
B	**Silviculture, forestry** *Including fertilisation, planting and re-planting, forestry practices*	Fens, Marsh, Bog, Wet heath, Reed Swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Rivers
C	**Mining, extraction of materials and energy production** *Including quarry activities, turbary and peat removal*	Bog, Dystrophic lake, Bog woodland
D	**Transportation and service corridors** *Including road construction, power transmission*	All wetland types
E	**Urbanisation, residential and commercial development** *Including Urban and industrial development, discharges and waste disposal*	Fen, Bog, Marsh, Wet Grassland, Scrub, Coastal wetlands
F	**Biological resource use other than agriculture & forestry** *Including leisure fishing, hunting*	Lake, Fen, Marsh, River, Bog, Coastal wetlands
G	**Human intrusions and disturbances** *Including recreational facilities, outdoor leisure activities, littering, trampling overuse*	Bog, Fen, Marsh, Reed Swamp, Wet Grassland; Coastal Wetlands
H	**Pollution** *Including surface and groundwater water pollution, air pollution*	Oligotrophic Lake, River, Marsh, Fen
I	**Invasive, other problematic species and genes** *Including invasive species, genetic pollution*	Oligotrophic Lake, River, Marsh, Fen
J	**Natural System modifications** *Including landfill, drainage, drain maintenance, water abstraction, burning*	Fen, Marsh, Bog, Reed Swamp, Lake margins, Wet grassland, River, Coastal Wetlands
K	**Natural biotic and abiotic processes (without catastrophes)** *Including organic material accumulation,*	Fen, Marsh, Bog, Wet woodland

5 Conclusions & Recommendations

5.1 Distribution and extent of the Wexford wetland resource

The aim of the WXWS 2022 was to establish a preliminary inventory of all wetland areas in the county. Information relating to these areas has been incorporated into a *WXWS Site database Site database* (holding textual information) with associated *GIS datasets* (holding spatial information). Through the inclusion of data on sites and their habitats, provided by other groups, and by using aerial imagery it has been possible to draw preliminary site boundaries for main wetland sites. In total, some 388 sites (main sites and sub-sites) have been identified in Wexford.

The most valuable outcomes of the WXWS 2022 are the databases that have been developed during the course of the study. These contain considerable information on the extent, distribution, previous studies carried out, and characteristics of the known wetland resource in the county. They should prove most useful as information sources for any future investigations into the biodiversity contribution of the wetlands of Wexford.

5.2 Knowledge of the Wexford wetland resource

From the results of the WXWS 2022 it has been possible to produce a comprehensive list of sites that contain wetland habitats. In relation to the sites which have been identified to date, significant gaps exist in relation to our knowledge of this wetland resource. Specifically, the following information deficits have been identified:

- A significant area of wetland across the county remain un-surveyed as indicated by the identification of 269 wetland sites which have not previously been reported in the literature;
- The exact extent of wetland areas within the county remains unclear. The following contributes to this lack of information:
    - Mapping of site areas during this project was done using pre-existing boundaries from third parties or drawn using aerial imagery interpretation. Accurate data on wetland extent can only be drawn using data collected from field surveys;
    - Wetland habitats often occur as a complex mosaic of different types within a single site making it difficult to map individual habitats.
- Improvements in our knowledge of the wetland resource in County Wexford, will only be achieved when a systematic wetland survey of the county is undertaken. Such a survey should at a minimum:
    - follow a standard accepted survey methodology and utilise appropriate data capture and management systems;
    - prioritise previously un-surveyed areas identified as having a high potential to support biodiversity; and
    - prioritise key habitats that are deemed most threatened and for which information is lacking.

5.3 Wetland Survey Recommendations

From the results of the WXWS 2022 the following recommendations in relation to future surveys, additional data acquisition and project development are suggested.

5.3.1 Further Development of Wetland Inventory

It is recommended that countywide surveys of wetlands in County Wexford are carried out to build on the preliminary inventory of wetlands compiled during the WXWS 2022.

Sites to be prioritised for survey should include those that have not been surveyed in detail in the past and those that are likely to contain wetland habitats of high conservation importance. Based on this, the following categories of sites should be prioritised:

- The **324 non-designated main sites identified by analysis of aerial photography** and other GIS datasets for which we have little or no ecological data;
- Sites that are locally rare or are **likely to contain wetlands habitats that are listed on Annex I of the EU Habitats Directive** (raised bog including regenerating cutover, alkaline fen, turlough, transition mire); and
- **County Council owned properties** that contain areas of potential wetland.

Future phases of the WXWS should aim to provide the following information on the wetland sites being surveyed:

- A detailed site description highlighting the wetland habitat types (classified according to Fossitt) present on each site;
- Detailed mapping of the extent of each of the wetland type(s) within each site;
- Accurate mapping of site boundaries to ensure conservation of a hydrologically intact unit;
- Recording of threats to the conservation and future protection of the site; to include restoration suggestions and management priorities and needs; and
- Conservation evaluation of each site based on its importance at a geographic scale (local, county, national, or international).

5.3.2 Planning Control

Based on the broad definition of wetlands that is contained in the Planning and Development Regulations 2011[2] and guidance on the Drainage and Reclamation of wetlands issued by the Department of the Environment (2011), all those sites listed in the GIS and database that are listed as having a wetland habitat present would conform to the definition.

It is therefore recommended that council planners consult with the WXWS GIS layers, which indicate potential wetlands in the county. Where a development could adversely affect a wetland – through water abstraction, infilling, drainage, etc. **an applicant shall be required to engage the services of a suitably**

[2] *http://www.irishstatutebook.ie/pdf/2011/en.si.2011.0454.pdf*

qualified ecologist to carry out **a site visit and provide a written assessment** and determination on whether the area supports a wetland of conservation interest.

As outlined in Section 2.3 above, the 2011 regulations require that any proposal to drain or reclaim a wetland area over 0.1 ha necessitate a Planning Application and EIA be undertaken. The outputs of the current study should prove useful to Wexford County Council in fulfilling its role in relation to this.

It is recommended that those sites listed as being of Local Importance (C) (high value) or higher should be considered for future protection within a network of locally important biodiversity sites. They should also be given due consideration in future development plans adopted by the county.

It is recommended that council staff should be aware of a variety of issues regarding wetlands when assessing development proposals and planning applications. These include:

- The need for an appropriate buffer zone surrounding wetland sites. This relates to the hydrological zone of influence which is different for every site and often extends beyond the extent of wetland (and in many cases designated site boundaries).
- The importance of hydrology in how wetland sites function and how indirect impacts on a wetland system can be caused by activities occurring at some distance from the wetland
- The cumulative effect of seemingly isolated losses of wetland habitats across the county on the county resource.
- The ecological value of wetland habitats adjacent to, and fringing lakes and ponds.
- The ecological value of areas of reed and tall sedge swamps, rivers and river flood plains in controlling and reducing the impacts of flooding events.
- The wetland fauna, some of which are listed on Annex II or IV of the Habitats Directive, found in the county wetlands and the potential impacts on these species as well as their habitats.
- The limited coverage provided in the initial NPWS biodiversity (ASI & NHA) surveys – this was never a comprehensive survey of the entire county – many sites of high nature conservation value **remain undesignated**.
- The potential value of wetland sites which are outside statutory designated areas and the need for adoption of a precautionary approach when assessing developments that may impact on same.
- The role that the wetland resource plays in combating global warming. Large quantities of carbon are stored within the wetland soils (in particular peat) of the county that could be lost due to drainage or other disturbance.

5.3.3 Management of Wexford Wetland Sites

For further information on best practice management guidelines for many of the wetland habitats listed, the reader is referred to "The Living Farmland – A Guide to Farming for Nature in Clare" (RRD 2008) which provides practical advice on habitat maintenance and improvement for landowners and farmers. In addition, the NPWS website (www.npws.ie) provides a range of guidelines to help with the protection, management and wise use of conservation-worthy habitats and protected species. Furthermore the Irish

Peatland Conservation Council has published a Management Handbook for Peatland, which provides practical advice on habitat management and restoration[3].

Newly proposed regulations requiring certain agricultural activities to go through the EIA process is a positive development and should aid the protection of wetlands throughout the country.

5.3.4 Enforcement of Fines for Illegal Dumping and Infill

Infilling and reclamation of wetland is an ongoing threat to many wetland resources in Ireland. This practice should be dissuaded through both education on the value of wetlands and the enforcement of suitably deterring fines. Article 10(1)(y) of the EPA Guidance Manual Waste Facility Permit and Registration Regulations requires that an application for a waste facility permit or certificate of registration contain details of the biodiversity of the land and specifically details wetlands within same. The protection of the diverse wetland resource in Wexford depends on strict enforcement of national conservation legislation by the NPWS, and planning laws by the Local Authorities to ensure any unauthorised damaging activities are prevented.

5.3.5 Control of Invasive Species in Wetlands

It is important that invasive species are controlled and eradicated within wetland sites as they have the potential to cause serious nuisance and can be very costly and difficult to remove once they become established. Typical species affecting wetlands include Rhododendron (*Rhododendron ponticum)*, Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*). It is recommended that all records of invasive species found in wetland sites (for example during future wetland surveys) in County Wexford are submitted to the Invasive Species Ireland database[4] where advice on control and removal is also available.

5.3.6 Water Framework Directive

As a member of the European Union, Ireland must, as of the 22nd December 2000 implement the Water Framework Directive (2000/60/EC). This directive provides a consolidated, strengthened framework for the protection and improvement of all of our waters - rivers, lakes, marine and ground waters, and of our water-dependent habitats and species. The aim of the Water Framework Directive is to prevent any deterioration in the existing status of our waters, including the protection of good and high status where it exists, and to ensure that all waters are restored to at least good status by 2015. The objectives of the WFD are:

- to protect and enhance the status of aquatic ecosystems (and terrestrial ecosystems and wetlands directly dependent on aquatic ecosystems).
- to promote sustainable water use based on long-term protection of available water resources.
- to provide for sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use.
- to provide for enhanced protection and improvement of the aquatic environment by reducing / phasing out of discharges, emissions etc.

[3] www.ipcc.ie
[4] http://www.invasivespeciesireland.com/sighting/

- to contribute to mitigating the effects of floods and droughts.
- to protect territorial and marine waters.
- to establish a register of 'protected areas' e.g. areas designated for protection of habitats or species.

Clearly the identification of wetland habitats in County Wexford assists in fulfilling not only obligations under the EU Habitats Directive and the National Biodiversity Plan but also in implementing the Water Framework Directive.

5.3.7 Public Information and Interpretation Measures

Public awareness about the importance of wetlands in County Wexford should be developed through a series of targeted measures. On-going public awareness campaigns should be undertaken to inform the people of Wexford of the value of the county's wetland resource and the valuable ecosystem services they provide. There are a number of supports available for communities wishing to conserve local wetlands. The Community Wetlands Forum (CWF) was established in September 2013, the community was developed from community groups involved in wetland conservation and work undertaken by Irish Rural Link on behalf of communities affected by the Habitats Directive (92/43/EEC). Membership to the group is open to groups involved in wetland conservation and other organisation and individual stakeholders who support the aims and objectives of the forum. The aim of the CWF is to provide a representative platform for community led wetland conservation groups based on the principles of community development. The Community Foundation for Ireland encourages applicants to apply for grant funding to fund the development of local community biodiversity plans (CBP). Grants are available to support community groups who wish to carry out ecological studies in their local community with a view to developing a CBP. For more information on funding available see https://www.communityfoundation.ie/grants/types-of-grants/environment-and-nature-fund.

These could include:

- Information aimed specifically at landowners and farmers to explain the value of wetlands on their land should be developed.
- Specific events county-wide as part of 'Heritage Week' or 'World Wetlands Day[5]' which take place annually.
- A series of school visits celebrating local wetlands – co-ordinated through the Heritage in Schools Scheme.
- Public display boards and signage at popular wetland sites should be developed to inform the public of their biodiversity value and the ecosystem services such wetlands play.
- A workshop on wetland management for landowners should be held.

[5] *http://www.ramsar.org/cda/en/ramsar-activities-wwds/main/ramsar/1-63-78_4000_0*

- A colour leaflet should be produced to illustrate the beauty and importance of wetland conservation within the county. A similar leaflet was produced in County Monaghan and County Clare.

5.3.8 Wetland Restoration

Opportunities exist for significant restoration and enhancement works to re-instate part of the biodiversity resource that has been lost due to peat exploitation and other land-uses over the past century. Local projects aimed at restoring or enhancing the value (biodiversity or educational) of wetlands should be encouraged and supported.

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7 Appendices

In the WXWS 2022 report appendices which follow, the PDF layouts (produced from Excel or Word files) have been formatted and reduced to allow printing of tables at A4 page size. The original Excel spreadsheets from which some of these PDFs were produced are included with this report (see Appendix 6 for contents of project deliverables).

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Appendix 1

Reports & information sources consulted during the compilation of the County Wexford Wetland Survey GIS & Site Database

1. Reports and data sources containing information on wetland sites in County Wexford consulted during the compilation of the WXWS database 2022.

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1898 WXCC (2020) Draft Wexford County Development Plan (2021-2027). Chapter 13: Heritage and Conservation. Wexford County Council.

1904 WXCC (2021) St. Waleran's Demesne Masterplan. Report for Wexford County Council.

2. GIS data sources examined in determining wetland sites in County Wexford.

Source title and author	Bibliography Code	Information type	Data Content Comments
GSI National Bedrock Map of Ireland 1:500,000 Scale (GSI)	246	GIS Dataset	Used to determine the underlying solid geology of sites
EPA (2006) Lakes and Ponds Dataset. EPA, Wexford (EPA)	253	GIS Dataset	Used to determine the location of lake, pond and reservoir sites
EPA (2006) Rivers. Streams, Canals, Dataset. EPA, Wexford (EPA).	899	GIS Dataset	Used to determine the location of rivers and canals
EPA (1997) Catchments All Island. EPA, Wexford (EPA)	255	GIS Dataset	Used as base-map in site mapping and wetland site identification.
OSI Color orthophotos (OSI)	258	GIS Dataset	Used as base-map in site mapping and wetland site identification
EPA Corine Land-cover in Ireland (CLC2000) (OSI)	259	GIS Dataset	Used in the production of site maps
OSI 1:5000 OS vector maps (OSI)	898	GIS Dataset	Used as base-map in site mapping and wetland site identification
OSI 6 Inch Map series (OSI)	262	GIS Dataset	Used as base-map in site mapping and wetland site identification
OSI 1:50000 Discovery series (OSI)	331	GIS Dataset	Used as base-map in site mapping and wetland site identification
OSI Townlands (OSI)	332	GIS Dataset	Used as base-map to identify townlands
Teagasc (2006) National Subsoils Data (EPA)	333	GIS Dataset	Identification of subsoil types
NPWS (2015) pNHA Boundaries (NPWS)	711	GIS Dataset	Used in site mapping and wetland site identification
NPWS (2015) NHA Boundaries (NPWS)	710	GIS Dataset	Used in site mapping and wetland site identification
NPWS (2018) SAC Boundaries (NPWS)	712	GIS Dataset	Used in site mapping and wetland site identification
NPWS (2017) SPA Boundaries (NPWS)	713	GIS Dataset	Used in site mapping and wetland site identification
Teagasc (2006) National Soils Data (EPA)	345	GIS Dataset	Identification of soil types
NPWS (2014) Various Digital habitat maps originating from regional and national ecological surveys carried out by NPWS.	1151	GIS Datasets	Used in site mapping and wetland site identification
BirdWatch Ireland I-WeBS Sites (2011)	487	GIS dataset derived from records	Used in determining potential wetland locations

Appendix 2

Meta Data for the WXWS Site Database and GIS datasets
(includes descriptions of data fields used)

Contents

1 Introduction

As part of the County Wexford Wetland Survey 2022 project (WXWS2022) two main database suites were used to hold site information, namely the GIS dataset and the Site database (version 1.0).

The structure of the database suite allows digital recording of field survey data on the iPad and facilitates data transfer and integration of results into the GIS and GIS system used by Wexford County Council via the export of data in the Site database into Excel and Filemaker formats.

As illustrated in Figure 1 below there are two main databases associated with the WXWS, the **Core Wetland Database (Version 1)** and the **Core Site Survey Database (Version 1)**. The structure of the site database suite developed and used throughout the current project is outlined below.

The relationship of the Core Wetland Database and Core Site Survey Database suites (i.e. the main database elements and the sub-databases that make up the *Wexford Wetland Database*) is presented in Figure 1 below. The fields held within each database and sub-database, are described in the table presented in Section 2.1 below.

The Core Wetland Database holds all basic site data obtained from an extensive search of various literature sources. This database is linked (via a unique site record number) to the Core Site Survey Database which holds all of the detailed data gathered during field surveys. Therefore by accessing the Core Wetland Database, the user is able to access all data relating to each site contained in the database including detailed survey data (habitat maps, species lists etc.) where the site in question has been the subject to a detailed targeted wetland field survey.

The files associated with the WXWS GIS are described in Section 5 below.

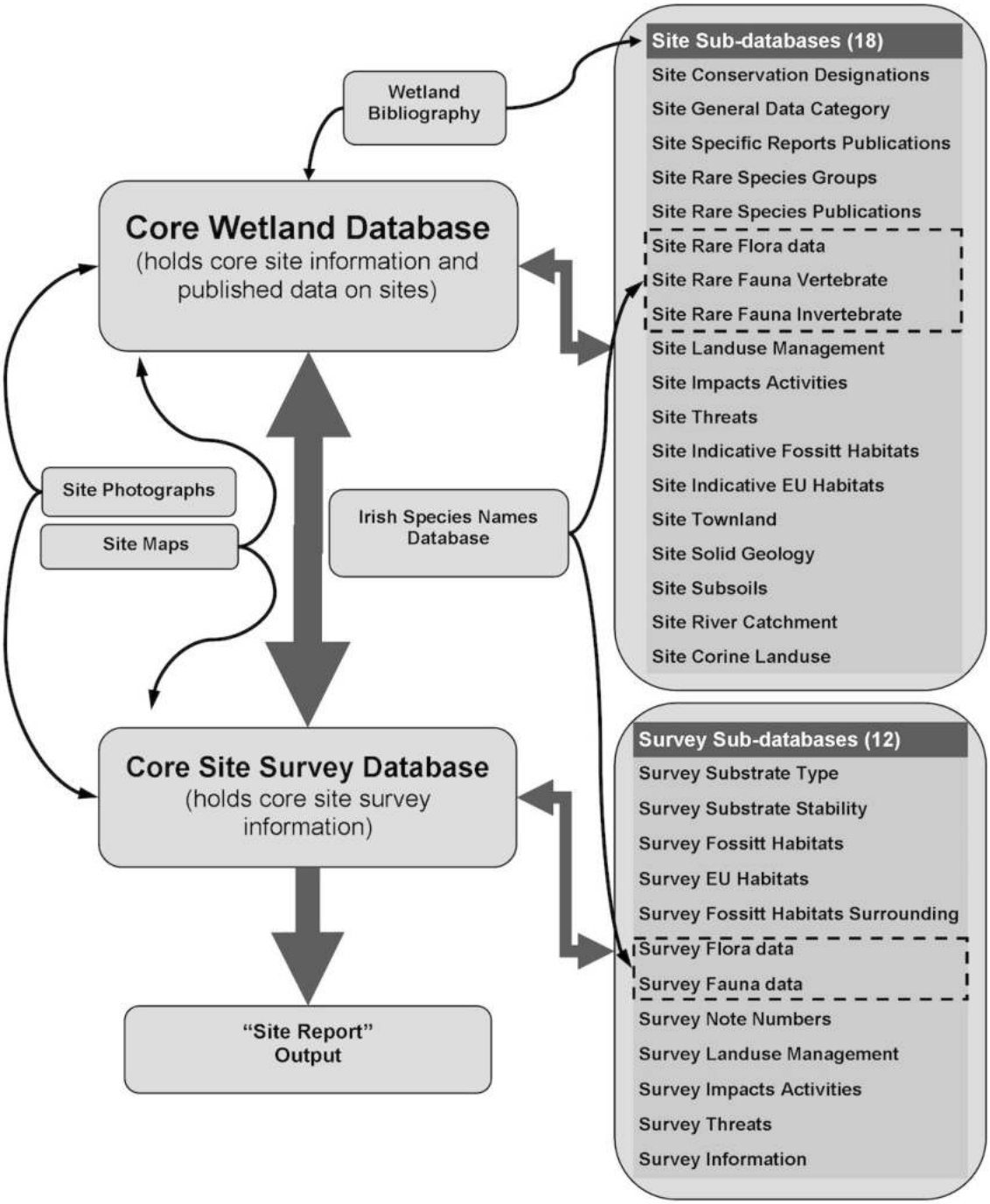


Figure 1. Relationship structure of the ***Site Database*** and the ***Survey Database*** and associated sub-databases.

2 Core Wetland Site Database Suite version 1.0

The ***Site Database*** (Filemaker Pro 12.0 software package) suite holds some of the information in the GIS database, but allows for easier sorting and display of site records, survey report preparation as well as data analysis. In addition this database and the associated sub-databases (18 in total) hold more detailed information on sites than is possible within the GIS for certain data fields (e.g. site descriptions, rare species recorded from the site, survey history etc.), and allows site photographs and maps to be displayed.

The database displays site data via a series of layouts. These layouts are used when adding or reviewing data on a site. These layouts are accessed via the green or yellow link buttons along the top of the database window.

The core Wetland Survey database amalgamates data from a series of 18 sub-databases to compile a complete site description. The sub-databases and the data they contain are detailed below.

2.1 Data fields held in the Site database suite (version 1.0)

An explanation of the data fields used in the database suite is provided below.

Table 2.1 Site database and sub-database files and the record data held within each database for individual sites.

** Name in bold is the name applied to database fields as seen when accessing the database in browse/operating mode; the underlined name is the actual field name assigned within the database (used when exporting data, performing calculations etc.).*

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
Database Fields Common to the Core Wetland Database and all associated sub-databases listed here		
	Site Code (Site Code UACC)	Unique site code for the site as assigned in Core Site database and used by each of the sub-databases to relate site record information. Auto generated.
	Database Record number (Database Record number**)**	Unique record number for each record entry within each database and sub-database. Auto generated.
	Created by (Created by)	Name of person who created record within each database and sub-database. Auto generated.
	Date Created (Date Created)	Date record was created within each database and sub-database. Auto generated.
	Modified by (Modified by)	Name of person who last modified record within each database and sub-database. Auto generated.
	Date modified (Date modified)	Date record was last modified within each database and sub-database. Auto generated.
	Time modified (Time modified)	Time record was last modified within each database and sub-database. Auto generated.
Core Wetland Database		The main Wetland Site database holding information on all wetlands identified within the county for which there is published/report site information.
	Site Name (Site Name UACC)	The name of the wetland site, based on the most widely used name for site proposed by third party sources and adopted for the project. (see also Other Groups Site Name below). *Where a site record occurs as a subsite within a larger site complex, the specific subsite name is followed by the name of the main site preceded by a - (e.g. MACMINE MARSHES - SLANEY RIVER VALLEY SAC, here Macmine Marshes, a subsite occurs within Slaney River SAC,*

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		the main site).
	Designated Site Code (Designated Site Code UACC)	NPWS Site Code number for NHA, SAC and SPA.
	Other Groups Site Name (Other Group Site Name UACC)	Alternative site name applied to site by other reports or publications (for reference). *(When trying to locate a site within the database it is essential that this field is also searched in the case where the site cannot be found under the Site Name field above).*
	Other Groups Site Code (Other Group Site Code UACC)	Site code applied by other groups (for reference).
	Site area (ha) from literature (Total Site Area (ha) from literature UACC)	
	Site area (ha) from GIS (Total Site area (ha) from GIS UACC)	Calculated site area from GIS dataset.
	Total Site Length (km) from literature (Total Site Length (km) from literature UACC)	
	Total Site Length (km) from GIS (Total Site Length (km) from GIS UACC)	Calculated site length from GIS dataset.
	Easting Centre (Easting Centre UACC)	The grid reference of the E co-ordinate of the site is recorded, where this is given in the new format of a 6 digit number.
	Northing Centre (Northing Centre UACC)	The grid reference of the N co-ordinate of the site is recorded, where this is given in the new format of a 6 digit number.
	Grid Reference (Grid Ref Old UACC)	Grid reference previously reported from literature. The grid reference of the site is recorded, where this is given in the old format of a letter followed by 4 or 6 digit number. *(It should be noted that this grid reference, based on information provided in published reports, should be interpreted with care, and in many cases may be found to be inaccurate. In relation to site location the Easting and Northing co-ordinates above are considered the more reliable when locating the site in question).*
	X coord ITM (X coord ITM)	The grid reference of X co-ordinate in ITM
	Y coord ITM (Y coord ITM)	The grid reference of Y co-ordinate in ITM
	Latitude (Latitude GRAD UACC)	Latitude coordinate of site
	Longitude (Longitude GRAD UACC)	Latitude coordinate of site
	Year last reported field Survey (Date of last survey UACC)	4 digit year for the last reported survey of site.
	First Noted in (Site Source UACC)	Reference to where site was first reported in literature source.
	County (County Name UACC and County Name UACC text string)	Two fields to record county; the first a check box selection; the second producing county names in which site occurs as a text string.
	Wetland areas on site (Wetland areas on site UACC)	Check box system to record whether a wetland type occurred on site, was likely to occur or was absent. Check box selection, only 1 choice to be selected. • YES • No wetland present

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		• No Data - wetland possible • No Data - wetland unlikely
	Site type (Site type UACC)	Check box allowing a site record to be characterised, i.e. whether the database record is for a discrete site or a subsite, a smaller part (e.g. lake) within a larger site complex. A subsite record was generally created where specific site data related to the subsite. *(Example: MACMINE MARSHES - SLANEY RIVER VALLEY SAC) - here Macmine marshes has a unique data record, while the inclusion of the Slaney River Valley SAC in the site name allows the relationship to the larger main site (an SAC) to be maintained and recognised).* Check box selection, only 1 choice to be selected. • Main Site • Sub-site
	Comment Box (Comment Box UACC)	Text field to hold temporary comments on site, queries on site etc. Used during data compilation phase of the project.
	Temporary flag record (Temporary flag record UACC)	Check box allowing the temporary flagging of selected site records. Used during data compilation or data abstraction phase of the project.
	Annex Species Present – EU Birds or Habitats Directive (Species Annex species Present EU Birds Habitats Directive UACC)	Yes No option for the reported occurrence of EU Habitats or Birds Directive Annex species on site.
	Red Data Book Species Present (Species Red Data Book Species Present UACC)	Yes No option for the reported occurrence of Red species on site.
	Comment/Notes on rare species groups (Species comments on rare groups UACC)	Comment box.
	Damaging Operations/ Threats on site comments (Damaging operations comments UACC)	Comment box.
	Site description and source (Previous site description UACC)	Text box holding site description as reported by third party source(s).
	Comment on Previous surveys (Comment box previous surveys UACC)	Comment box.
	Indicative Site Wetland Conservation Ranking (Indicative Site Wetland Conservation Ranking)	Check box system to record overall indicative ranking of site based on designated status or ranking following filed survey: A Rating: Internationally Important B Rating: Nationally Important C+ Rating: County Conservation value C Rating: Local conservation value (high value) D Rating: Local conservation value (moderate value) E Rating: Local conservation value (low value) F Rating: Unknown value - survey required
	Indicative Site Wetland Conservation Ranking Comment (Indicative Site Wetland Conservation Ranking Comment)	Comment box.

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
	Site Ownership (Site Ownership)	Check box allowing site ownership to be recorded based on published information or field survey observations.
Site Conservation Designations		Sub database holding information on the conservation status of a site.
	Site Designation (Site designations MACC)	If the site has or was designated under one of the various conservation initiatives the appropriate designation was recorded. Choose from: • **NHA** - Natural Heritage Area with legal protection • **cNHA** - candidate Natural Heritage Area no legal protection • **pNHA** - proposed Natural Heritage Area as advertised in 1995 some legal protection • **SAC** - Special Area of Conservation with legal protection • **cSAC** - candidate Special Area of Conservation open to appeal/ transmitted to EU • **pcSAC** - proposed candidate Special Area of Conservation open to appeal/ not yet transmitted to EU • **SPA** - Special Protection Area • **cSPA** - candidate Special Protection Area • NP - National Park with legal protection • WHS - World Heritage Site • NNR - National Nature Reserve with legal protection • BIO - Unesco Biosphere Reserve • RAM - Ramsar Site • ESA - Environmentally Sensitive Area • EDS - Eurodiploma Site • ASI - Area of Scientific Interest • BGR - Berne Convention Biogenetic Reserve • COR - Corine site • WS - Wildfowl Sanctuary • RFF - Refuge for Flora or Fauna • CBA - Coillte Biodiversity Area • CFP - Coillte Forest Park • Undesignated site - no known designation • De-designated NHA – Site previously designated as an NHA but since downgraded by NPWS
Site General Data Category		Sub database holding a list of information categories under which data has been recorded on the site in previous reports or data sources.
	General information available on site (General information available on site MACC)	Choose from: • **Vegetation Type** - relevé data recorded from site • **Species Data** - recorded for general and/or on rare species • **Habitat Data** - habitat data in Fossitt format available for all or part of site

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		• **Habitat Map** - map data of variable quality available (may include GIS habitat map) • **Hydrochemical Data** - water chemistry data available on site • **Site Size** - from published source • **Ownership Data** - owner information available on site • **Detailed Site Description** - detailed description of available in published report • **Site Management** - site management recommendations have been made in published report • **Conservation Designation** - site conservation recommendations have been made in published report • **iWeBS Site** - site is listed as a location for bird recording as part of the Irish Wetlands Birds Survey Scheme • **Visitor & Recreation Facilities** - wetland site with visitor and recreational facilities i.e. parking, walks and trails, picnic areas, seating, viewing platforms etc., other than angling facilities • **Angling Lake** - lake or river is used or managed as a location for angling, with or without angling facilities • **EPA Drinking Water Lake** - lake or river is used or managed as a drinking water source
Site Specific Reports Publications		Sub database holding a list of reports and publications which refer to site; uses Wetland Bibliography database to get full citation.
	Reference Code (Reference Code)	Unique bibliography reference code.
	Amalgamated Reference (Amalgamated ref)	Full report or publication citation as text string; lookup from Wetland Bibliography database.
Site Rare Species Groups		Sub database holding information as reported from literature on groups recorded on site (e.g. rare plants, animals, EU spp etc.)
	Species rare groups present on site (Species rare groups present on site MACC)	Choose from: • Botanical • Higher Plant • Fern • Bryological • Lichen • Algae • Fungi • Zoological • Invertebrates • Invertebrates Mollusc • Invertebrates Insect • Invertebrates Arachnid • Invertebrates Crustacean • Vertebrates • Birds • Mammals

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		• Bats • Amphibian • Fish • Reptile
Site Rare Species Publications		Sub database holding a list of reports and publications which refer to rare species on a site; sub database uses Wetland Bibliography database to get full citation.
	Reference Code (Reference Code)	Unique bibliography reference code.
	Amalgamated Reference (Amalgamated ref)	Full report or publication citation; lookup from Wetland Bibliography database.
Site Rare Flora Data		Sub database holding information as reported from literature on rare flora recorded on site.
	Rare flora name Latin (Rare flora Latin site list MACC)	Drop down list of Latin wetland plant species names.
	Rare flora name English (Rare flora name English)	Sub database uses Irish Species database to get related English name.
Site Rare Fauna Vertebrate		Sub database holding information as reported from literature on rare vertebrate fauna recorded on site
	Rare vertebrate fauna English name (Rare vertebrate fauna English site list MACC)	Drop down list of English wetland invertebrate fauna species names.
	Latin Name (Rare vertebrate fauna Latin site list MACC)	Sub database uses Irish Species database to get related Latin name.
Site Rare Fauna Invertebrate		Sub database holding information as reported from literature on rare vertebrate fauna recorded on site.
	Rare invertebrate fauna Latin name (Rare invertebrate fauna site list MACC)	Drop down list of English wetland Invertebrate fauna species names.
	English name (Rare invertebrate fauna English site list MACC)	Sub database holding information as reported from literature on rare invertebrate fauna recorded on site.
Site Landuse Management		Sub database holding a list of landuse management options occurring on site.
	Landuse Management on site (Landuse Management on site MACC)	NPWS list of landuse options. Drop down options list.
	Frequency Landuse Management (Frequency Landuse Management on site MACC)	Drop down options list. Scale: 1 Rare (<5%) 2 Occasional (5-20%) 3 Frequent (21-50%) 4 Dominant (>50%)
Site Impacts Activities		Sub database holding a list of impacts and activities influencing the conservation status of the site and the intensity and impact these are having on the site.
	Impact & Activities Influencing Conservation Status of site (Damaging operations on site MACC)	List of EU Natura 2000 site impacts and activities updated by NPWS in 2009. Drop down options list.
	Intensity (Damage intensity on site MACC)	Drop down options list. **Intensity** of the influence of an activity is rated as • A = high, • B = medium, • C = low influence • D = unknown
	Impact (Damage Impact on site MACC)	Drop down options list. Impact rating scale: **Impact** is rated as • –2 = irreparable negative influence

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		• -1 = reparable negative influence • 0 = neutral • +1= natural positive influence • +2 = strongly managed positive influence • Unknown
Site Threats		Sub database holding a list of threats to site.
	Threats on site (Threats on site MACC)	List of EU Natura 2000 site impacts and activities updated by NPWS in 2017. Drop down options list.
Site Indicative Fossitt Habitats		Sub database holding a list of Fossitt habitats reported in published sources as occurring on the site.
	Habitats Present on site full Fossitt name (Habitats present on site full Fossitt name MACC)	List of Fossitt (2000) Irish habitat types. Drop down options list.
	Habitats Present on site Fossitt code only (Habitats Present on site Fossitt code only MACC)	Calculation results the Fossitt habitat code entered into data field is based on full Fossitt habitat name entered in field above.
Site Indicative EU Habitats		Sub database holding a list of EU habitats reported in published sources as occurring on the site.
	EU Directive Habitats on site (Habitats EU Directive Habitats on site MACC)	List of EU Habitats Directive habitat types. Drop down options list.
Site Townlands		Sub database holding a list of townlands occurring on the site.
	Site Townland (Site Townlands MACC)	Data imported from GIS. *(In the case of a main site (see definition below), all townland(s) recorded within the site polygon mapped are provided. For subsites only the townland directly at the grid reference point location is provided. Similar rules apply to information provided for site Solid Geology, Subsoil Type, River Catchment & Corine Landuse).*
Site Solid Geology		Sub database holding a list of rock types occurring on the site.
	Site Solid Geology (Site Solid Geology MACC)	Data imported from GIS.
Site Subsoils		Sub database holding a list of Sub-soil types occurring on the site.
	Site Subsoils (Site Subsoils MACC)	Subsoil (quaternary deposit) underlying the site. Obtained from the GIS. Key to soil types is provided below.
Site River Catchment		Sub database holding a list of River Catchments occurring on the site.
	Site River Catchment (Site River Catchment MACC)	Data imported from GIS.
Site Corine Habitats		Sub database holding information on Corine habitats recording on a site.
	Site Corine Landuse (Site Corine Landuse MACC)	Data imported from GIS.

Table of Subsoil (quaternary deposit) recognised in the present project.

IFS soil abbreviation	Included Great Soil Groups	IFS Soil Description	IFS Code
		Deep well drained mineral	**1**
AminDW	Acid Brown Earths Brown Podzolics	Derived from mainly non-calcareous parent materials	11
BminDW	Grey Brown Podzolics Brown Earths(medium-high base status)	Derived from mainly calcareous parent materials	12
		Shallow well drained mineral	**2**
AminSW	Lithosols Regosols	Derived from mainly non-calcareous parent materials	21
BminSW	Renzinas Lithosols	Derived from mainly calcareous parent materials	22
		Deep poorly drained mineral	**3**
AminPD	Surface water Gleys Ground water Gleys	Derived from mainly non-calcareous parent materials	31
BminPD	Surface water Gleys Ground water Gleys	Derived from mainly calcareous parent materials	32
		Shallow poorly drained mineral	
AminSP	Surface water Gleys (Shallow) Ground water Gleys (Shallow)	Derived from mainly non-calcareous parent materials	33
BminSP	Surface water Gleys (Shallow) Ground water Gleys (Shallow)	Derived from mainly calcareous parent materials	34
		Poorly drained mineral soils with peaty topsoil	**4**
AminPDPT	Peaty Gleys	Derived from mainly non-calcareous parent materials	41
BminPDPT	Peaty Gleys	Derived from mainly calcareous parent materials	42
AminSPPT	Peaty Gleys (Shallow)	Derived from mainly non-calcareous parent materials	45
BminSPPT	Peaty Gleys (Shallow)	Derived from mainly calcareous parent materials	44
		Shallow, lithosolic-podzolic type soils potentially with peaty topsoil	
AminSRPT	Podzols (Peaty) Lithosols Peats	Predominantly shallow soils derived from non-calcareous rock or gravels with/without peaty surface horizon	43
BminSRPT	Lithosols Peats	Predominantly shallow soils derived from calcareous rock or gravels with/without peaty surface horizon	46
		Alluviums	**5**
AlluvMIN	Variable	Mineral alluvium	51
AlluvMRL	Variable	Marl type soils	53
Lac	Variable	Lacustrine–type soils	56
		Peats	**6**
RsPt	Basin Peats	Raised bog	61
BktPt	Blanket Peats	Blanket peat	63
Cut	Basin Peats Blanket Peats (some)	Cutaway/cutover peat	65

IFS soil abbreviation	Included Great Soil Groups	IFS Soil Description	IFS Code
FenPt	Basin Peats	Fen peat	66
		Miscellaneous	**7**
Scree		Scree	70
AeoUND		Aeolian undifferentiated	71
MarSands		Beach sand and gravels	72
MarSed		Marine/ Estuarine sediments	73
Swamp		Reed Swamp/Marsh	75
Made		Made/Built land	74
Water		Lake (including reservoirs)	76
Unclass		Unclassified	77

3 Wetland Survey - Survey database suite

To hold data for future field surveys of wetland sites in each county the Survey database was designed. This **County Wexford Wetland Survey – Survey Database** (version 1.0) was linked to the Core Site database via the unique **site record number** assigned to each site.

Details of the data fields (name as it appears in operational mode within various database layouts; and in brackets the field name within database) in the Wetland Survey database are provided below.

Once survey information has been incorporated into the survey database, and by selecting the "Show complete site report" button, a full survey report for the site can be viewed on screen. By selecting the "Create final PDF of complete site report - description, maps and habitat map" button a PDF of the complete site report is created and can be saved to a PDF file.

A series of database layouts, containing site survey information, form the main site database and content of the survey database. These layouts were used when adding or reviewing survey data on a site. These layouts are accessed via the green or yellow link buttons along the top of the survey database window.

An explanation of the data fields used in the survey database is provided below.

3.1 Data fields held in the Survey database suite (version 1.0)

** Name in bold is the name applied to database fields as seen when accessing the database in browse/operating mode; the underlined name is the actual field name assigned within the database (used when exporting data, performing calculations etc.).*

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
Database Fields Common to the Core Site Survey Database and all associated sub-databases listed here		
	Site Code (Site Code UACC)	Unique site code for the site as assigned in Core Site database and used by the Core Site Survey database in each of the sub-databases to relate site records.
	Database Record number (Database Record number**)**	Unique record number for each record entry within each database and sub-database.
	Survey Code Number (Survey Code number)	Unique survey code number as assigned in Core Site database and used by the Core Site Survey database each of the sub-databases to relate site records for a particular survey.
	Created by (Created by)	Name of person who created record within each database and sub-database.
	Date Created (Date Created)	Date record was created within each database and sub-database.
	Modified by (Modified by)	Name of person who last modified record within each database and sub-database.
	Date modified (Date modified)	Date record was last modified within each database and sub-database
	Time modified (Time modified)	Time record was last modified within each database and sub-database.
Core Site Survey Database		Site Survey database holding information on wetlands where a detailed field survey has been undertaken. Only data fields held within the database are described here, lookups of fields from related databases or sub-databases are described elsewhere.
	Site Name (Site Name UACC)	Name as provided in the Core Site database.
	Survey full title (Survey full title UACC)	Full title of survey (with year). Drop down menu selection.
	Survey code (Survey code UACC)	Abbreviated code for field survey (includes the year survey was undertaken). Drop down menu selection.
	Date of wetland survey (Date of Field Survey UACC)	Date detailed field survey undertaken. Format dd/mm/yyyy.
	Name of Wetland Surveyors (Name of Wetland Surveyors UACC)	Name of field surveyors who surveyed site. Drop down menu selection.

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
	Survey photographic no. (Survey Photographic Numbers UACC)	Photographic image code from survey together with initials of photographer.
	Conservation Ranking following Survey (Conservation Ranking after survey UACC)	Conservation ranking for site based on results of field survey and subsequent conservation assessment. One check box option to be selected following survey. • A Rating: Internationally Important • B Rating: Nationally Important • C+ Rating: County Conservation value • C Rating: Local conservation value (high value) • D Rating: Local conservation value (moderate value) • E Rating: Local conservation value (low value) • F Rating: Unknown value - survey required
	Altitude (Site altitude mOD UACC)	Altitude of site meters above Ordnance datum.
	Water table (cm) (Water table depth cm UACC)	Water table depth within wetland site. Recorded in cm.
	Substrate depth (cm) (Site substrate depth UACC)	Substrate depth under wetland area recorded in cm.
	Damaging Operations/ Threats on site comments (Damaging operations comments UACC)	Comment box.
	Site location (Report Survey Site location UACC)	In this field include information on the location of the site relative to nearest town etc. Text field with maximum character allowance of 250.
	Survey site description with reference to wetlands present (Report Site description UACC)	In this field include general site description, and/or comment on habitats present, substrate type, stability, depth and water table. Text field with maximum character allowance of 250.
	Comments on potential occurrence of EU habitats on site (Report Survey Site EU habitats comments UACC)	EU Habitats Directive habitats recorded for the site; EU rare species information etc. Text field with maximum character allowance of 250.
	Management recommendations following survey (Report Management recommendations UACC)	Wetland enhancement or management recommendations for site following survey. Text field with maximum character allowance of 250.
	Future survey recommendations (Report Future Survey recommendations UACC)	Additional survey recommendations for site following survey. Text field with maximum character allowance of 250.
	Landowner information comments	Comments provided by landowners

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
	(Report Landowner information comments UACC)	on site history, ownership, management etc. Text field with maximum character allowance of 250.
Survey Substrate Type		Sub database holding a list of soil types on the site observed during survey.
	Site Substrate Type (Site substrate type MACC)	Drop down list options: • Mineral Soil • Clay • Silt • Alluvial deposit • Bedrock • Loose Rock • Rocky Till • Peat • Tufa • Made Ground • Other
Survey Substrate Stability		Sub database holding a list of substrate stability options observed during survey.
	Site Substrate Stability (Site substrate stability MACC)	Drop down list options: • Very firm • Firm • Some quaking • Quaking • Floating mat
Survey Fossitt Habitats		Sub database holding a list of Fossitt habitats as occurring on the site following survey.
	Habitats Present on site full Fossitt name (Habitats present on site full Fossitt name MACC)	List of Fossitt (2000) Irish habitat types. Drop down menu list.
	Fossitt code (Habitats Present on site Fossitt code only MACC)	Calculation results the Fossitt habitat code entered into data field is based on full Fossitt habitat name entered in field above.
Survey Fossitt Habitats Surrounding		Sub database holding a list of Fossitt habitats as occur surrounding the site following survey.
	Habitats Present surrounding site full Fossitt name (Habitats present surrounding site full Fossitt name MACC)	List of Fossitt (2000) Irish habitat types. Drop down menu list.
	Fossitt code (Habitats Present surrounding site Fossitt code only MACC)	Calculation which results in Fossitt habitat code being entered into data field based on full habitat name.
Survey Flora Data		Sub database holding a list of flora species recorded during the survey.
	Species Flora (Latin name) (Species Flora site list MACC)	List of flora recorded on site. Higher and lower plants, mosses and lichens. Drop down menu list.
	English name (English Flora species name)	Sub database uses Irish Species database to get related English name.

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
	Species temporary survey comment box (Species temporary survey comment box)	Comment box for use on field survey or to allow recording of DAFOR species abundance.
Survey Fauna Data		Sub database holding a list of flora species recorded during the survey.
	Species Fauna site list (Species Fauna English name site list MACC)	List of fauna (vertebrates and invertebrates) recorded on site. Drop down menu list.
	Species Fauna Latin name (Species Fauna Latin name site list MACC)	Sub database uses Irish Species database to get related Latin name.
	Species temporary survey comment box (Species temporary survey comment box)	Comment box for use on field survey or to allow recording of species abundance information.
Survey Note Numbers		Sub database holding survey note number, note type and descriptive data.
	Note Number (Report target notes numbers MACC)	Drop down menu selection. N1, N2 etc.
	Note Category (Report target notes category MACC)	Drop down menu selection: • Habitat • Damage • Boundary • Relevé • Hydrology • Flora • Fauna • Ownership • Management • Photograph • General
	Note (Report target notes MACC)	Text field with maximum character allowance of 250.
Survey Landuse Management		Sub database holding a list of landuse management options occurring on site as observed during survey
	Landuse Management on site (Landuse Management on site MACC)	NPWS list of landuse options. Drop down list.
	Frequency Landuse Management (Frequency Landuse Management on site MACC)	Drop down list options. Scale: 1 Rare (<5%) 2 Occasional (5-20%) 3 Frequent (21-50%) 4 Dominant (>50%)
Survey Impacts Activities		Sub database holding a list of impacts and activities influencing the conservation status of the site and the intensity and impact these are having on the site, as observed during survey.
	Impact & Activities Influencing Conservation Status of site (Damaging operations on site MACC)	List of EU Natura 2000 site impacts and activities updated by NPWS in 2009. Drop down list.
	Intensity (Damage intensity on site MACC)	**Intensity** of the influence of an activity is rated as: • A = high, • B = medium,

Database name *(sub database names are italicised)*	**Field name ***	**Comment**
		• C = low influence • D = unknown
	Impact (Damage Impact on site MACC)	Impact rating scale: • –2 = irreparable negative influence • -1 = reparable negative influence • 0 = neutral • +1= natural positive influence • +2 = strongly managed positive influence • Unknown
Survey Threats		Sub database holding a list of threats to site, as observed during the survey.
	Threats on site (Threats on site MACC)	List of EU Natura 2000 site impacts and activities updated by NPWS in 2009. Drop down list.
Survey Information		Sub database holding a list of information categories for the site.
	Site survey information (Site field survey information MACC)	Editable drop down list options: • Detailed site survey undertaken • Limited site inspection only • No survey yet undertaken • Additional Survey may be required • NHA Ranger Survey exists • NHA Ecologists Survey exists • Site boundary defined • Releve data collected • Water chemistry samples collected Etc.

4 Other related databases used by the wetland study database suite

In addition to the two main databases (Core and Survey databases) used to hold site related data, a number of secondary databases, holding a list of publications and references, Irish flora and fauna species names, Site Photographs and Site Maps (habitat, aerial photographs etc.) complete the suite of databases used in the preparation of site reports and data storage for the database suites. These are explained in more detail below.

Database name	Comment
Wetland Bibliography	Secondary database containing a list of publication and report citations. Linked to **Site Rare Species Publications** and **Site Specific Reports and Publications** sub-database (*inter alia*) via the unique bibliography code number.
Site Photography	Secondary database containing a maximum of 3 site photographs from the field survey and associated photograph captions. Linked to **Core and Survey database** via the unique site code number and unique site survey code number. **Site Photographs 1, 2 & 3** (Survey Site Photograph 1, 2 & 3) Layout allows 3 site photographs to be imported to represent wetlands on site. **Site Photograph Captions 1, 2 & 3** (Survey Site Photograph Caption 1, 2 & 3 UACC)**.** Layout allows 3 site photograph captions to be recorded.
Site Maps and Airphoto	Secondary database containing 3 site maps produced and exported from the GIS dataset after survey was completed (Locations map showing site on OS Discovery Map; Aerial photograph showing site boundary and Habitat Map of the site). Linked to **Core and Survey database** via the unique site code number and unique site survey code number. **Site location Discovery Map** (Survey Site locations map image) Layout allows image of wetland site location map based on OS Discovery map to be imported. A caption field for the map is also included (Site Discovery Map Caption UACC). **Air photograph site location** (Air aerial photograph image) Layout allows image of wetland site location map based on Aerial photograph to be imported. A caption field for the photograph is also included (Site Aerial Photograph Caption UACC). **Site Habitat Map** (Site habitat map image) Layout allows image of wetland habitat map to be imported. A caption field for the habitat map is also included (Site habitat map image caption UACC). **All three of the above can be viewed as enlarged images by selecting the appropriate "Go to enlarged layout" button.**
Site Maps Key and Airphoto Copyright	Secondary database with key to habitat maps; OS copyright permission for use of aerial photographs and maps on project and overall site locations map for the survey. Linked to **Core and Survey database** via the unique site survey code number.
Irish Species Names	Secondary database holding a list of Irish Flora and Fauna names, in English and Latin, used in the compilation of species records from sites and in the compilation of final site reports. Linked to **Site Rare Flora**, **Site Rare Fauna Vertebrate** and **Site Rare Fauna Invertebrate** sub-databases (used by core database) and the **Survey Fauna** and **Survey Flora** sub-databases (used by survey database).

5 Wetland Survey 2022 GIS Dataset

The ***WXWS GIS Datasets*** (ArcView 10.6 GIS software package) hold site related information on each polygon and point feature mapped. Data held in this dataset were converted into MapInfo format at the end of the project period for use by Wexford County Council.

A detailed explanation of the various GIS files and associated attribute fields is presented in the following sections.

The folder titled '***WXWS 2022 GIS Datasets***' included with the final deliverables to this report contains the final GIS outputs from the County Wexford Wetland Survey 2022 (WXWS2022).

Both ArcGIS and MapInfo versions of the final GIS files are included with the final deliverables to this report. A description of the various files that make up the GIS is presented below along with a description of the various data fields attached to each file.

In general, the methodology used in the preparation of the GIS datasets follows those outlined by Smith *et al.* (2011). See Appendix 1 for information on the various spatial datasets used during the project.

All mapping was carried out using Irish Transverse Mercator (ITM) co-ordinate system on ArcMap 10.8.2.

- All features were attributed with the standard field names for the project.
- Clipping was carried out to ensure that there were no overlapping polygons.
- Expert opinion was used to resolve problem areas.

Most boundary features were obtained from third party datasets (such as OSI prime datasets, subsoil dataset, NPWS survey datasets, and Teagasc habitat mapping etc) and are referenced as such in the relevant attribute field. In many instances digitising of boundaries was carried out by tracing the 1:5000 vector mapping for the county, however where no suitable vector features existed then boundaries followed features on aerial photography at a scale not greater than 1:2000.

5.1 GIS dataset– files and associated data fields

In all, two different GIS shape-files relating to the distribution and extent of freshwater wetland habitats in County Wexford were produced as summarised in Table 5.1 below. Further details of attributes and data associated with each of the GIS files are presented below.

Table 5.1: WXWS 2022 GIS shapefiles produced during the current study.

GIS File Name	File Description
WXWS_2022_Site_Locations_ITM	This file shows point locations of all wetland sites identified during the 2022 project.
WXWS_2022_Site_Boundaries_ITM	This file shows the boundaries of all sites identified during the 2022 project. In some cases where boundaries were not available, provisional boundaries were digitised.

5.1.1 WXWS 2022 Site Locations

This file shows point locations of all WXWS sites identified during the 2022 project. Some of the fields have not been populated but may be of use following any future updates or field surveys. The various attribute fields associated with this file include:

Attribute	Description
Site_Name	This contains the site name as recorded in the site database.
MIW_Code	A number field containing a unique numeric site code according to that recorded in the site database.
Site_Code	A number field containing a unique numeric site code according to that recorded in the site database.
Site_Type	This is a text field (**Main site** or **Sub-site**) indicating whether the record relates to a Main site or Sub-site site. Sub-sites refer to areas that occur within larger main sites and are not indicated by a separate boundary in the site boundary file.
SurveyYear	Year field survey was last undertaken.
Easting	X coordinate (Easting) of the point location (Irish Transverse Mercator).
Northing	Y coordinate (Northing) of the point location (Irish Transverse Mercator).

5.1.2 WXWS 2022 Site Boundaries

This file shows the boundaries of all sites identified during the WXWS2022, where such boundaries were available in digital format or could be drawn with confidence. Some of the fields have not been populated but may be of use following any future updates or field surveys. The various attribute fields associated with this file are as follows:

Attribute	Description
Site_Name	This contains the site name as recorded in the site database.
MIW_Code	A number field containing a unique numeric site code according to that recorded in the site database.
Site_Code	The site code according to that recorded in the site database.
PolygSrce	This refers to the source dataset of the polygon. In some cases site boundaries were drawn during the WXWS2022 although most polygons originated from third party sources.
SurveyYear	Year that field survey was undertaken. Not populated.
Shape_Length	Measure of the length of the sites perimeter.
Shape_Area	A calculation field which automatically calculates the area (square metres) covered by the site polygon.
Site_Area	Area of site in hectares.

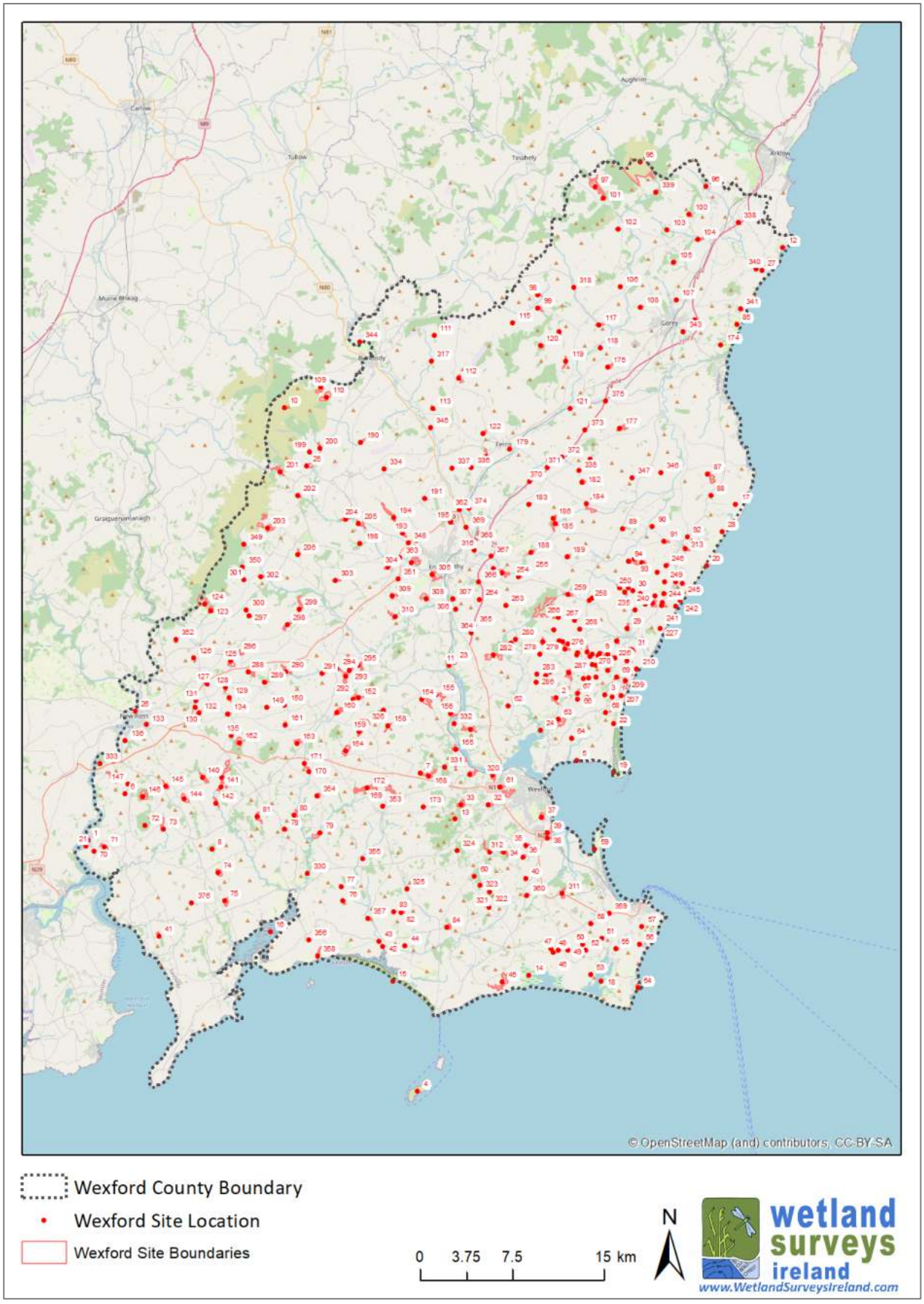
Appendix 3

County Wexford Wetland Survey

Map of potential wetland sites held within the GIS & Site Database and associated site lists

(see Mapbook PDFs of sites in County Wexford for more detailed map location of sites)

County Wexford - Site Map



County Wexford Site List

Data presented for each site includes: Site code, Site name, Grid reference (Irish Grid Easting and Northing), Site Type, Designation and Designated Site Code. (An Excel file version of this table is included with the final deliverables to this report).

For a complete export of all data held on each site within the WXWS site database see the Excel file (WXWS_Site_List_Summary.xlsx) For an explanation of the data columns in the Excel file see report Appendix 2.

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX1	RIVER BARROW AND RIVER NORE SAC (WEXFORD)	268146	117488	Main Site	SAC, pNHA	002162
WX2	KILCORAAL FEN cNHA	306300	129100	Main Site	cNHA	002906
WX3	SCREEN HILLS SAC	310310	129332	Main Site	SAC, ASI, SGI	000708
WX4	SALTEE ISLANDS SAC SPA	295000	97000	Main Site	SPA, SAC, ASI, SGI	004002 / SAC 000707
WX5	WEXFORD SLOBS AND HARBOUR SAC SPA	308000	124000	Main Site	pNHA, SAC, SPA, ASI, NNR, RAM , cNHA, SGI	000781 / 000712 / 004076
WX6	BALLYKELLY MARSH pNHA	271155	121284	Main Site	pNHA	000744
WX7	COOLTEEN WETLAND cNHA	295231	122943	Main Site	cNHA	002700
WX8	BOLEY FEN pNHA	278261	116791	Main Site	pNHA	000699
WX9	BALLYROE FEN AND LAKE pNHA	309849	132712	Main Site	ASI, pNHA	000747
WX10	BLACKSTAIRS MOUNTAINS SAC (WEXFORD)	284144	152736	Main Site	SAC, ASI, SMR, SGI	000770
WX11	SLANEY RIVER VALLEY SAC (WEXFORD)	297568	131722	Main Site	pNHA, SAC, WS	000781
WX12	KILPATRICK SANDHILLS SAC	324820	165821	Main Site	SAC, SGI	001742
WX13	FORTH MOUNTAIN pNHA	298035	119294	Main Site	pNHA, ASI, SGI	000761
WX14	TACUMSHIN LAKE SAC SPA	304100	106500	Main Site	SAC, SPA, ASI, WS, SGI	000709
WX15	BALLYTEIGE BURROW SAC SPA	293000	106000	Main Site	SAC, NNR, SPA, ASI, pNHA, SGI	000696 004020
WX16	BANNOW BAY SAC SPA	283000	110000	Main Site	SAC, SPA, ASI, RAM , cNHA, WS, SGI	000697 005179 004033
WX17	CAHORE POLDERS AND DUNES SAC SPA	320961	144847	Main Site	SAC, SPA, SGI	000700
WX18	LADYS ISLAND LAKE SAC SPA	310000	106000	Main Site	SAC, SPA, ASI, SGI	000704 004009
WX19	RAVEN POINT NATURE RESERVE SAC SPA	311000	123000	Main Site	SAC, NNR, SPA, ASI, RAM , SGI	000710
WX20	KILMUCKRIDGE - TINNABERNA SANDHILLS SAC	318571	139864	Main Site	SAC	001741
WX21	BARROW SALT MEADOWS - RIVER BARROW AND RIVER NORE SAC	268000	117000	Sub-site	ASI, pNHA, SAC	000698 002162
WX22	CURRACLOE - WEXFORD SLOBS AND HARBOUR pNHA	311000	127000	Main Site	ASI, pNHA, SPA, SAC, SGI	000712
WX23	MACMINE MARSHES - SLANEY RIVER VALLEY SAC	298000	132000	Sub-site	ASI	
WX24	CASTLEBRIDGE MARSH - SLANEY RIVER VALLEY SAC	304964	126470	Sub-site	ASI, SAC, pNHA, SPA	000712 004076 000781
WX25	URRIN HEADWATERS	286000	148000	Main Site	ASI	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX26	RIVERBANK AT NEW ROSS - RIVER BARROW AND RIVER NORE SAC	272000	128000	Sub-site	ASI, SAC	
WX27	KILGORMAN RIVER MARSH pNHA	323082	163944	Main Site	pNHA	001834
WX28	BALLYTEIGE MARSH pNHA	319850	142634	Main Site	pNHA	001930
WX29	CASTLETALBOT LAKE	312112	134781	Main Site	PNR	
WX30	TINNICK PONDS	312557	137813	Main Site	Undesignated site	
WX31	INCH POND	312499	133042	Main Site	Undesignated site	
WX32	NEWBAY LAKE	300772	120387	Main Site	Undesignated site	
WX33	SHELMALIERE COMMONS LAKE	298548	120351	Main Site	LAP, SGI	
WX34	JOHNSTOWN CASTLE LAKES	302075	116507	Main Site	PNR	
WX35	LEVITSTOWN LAKES	303916	117023	Main Site	Undesignated site	
WX36	POLLSALLAGH LAKE	303618	116109	Main Site	Undesignated site	
WX37	KERLOGUE LAKE	305125	119340	Main Site	Undesignated site	
WX38	WHITESTOWN AND BOGGANSTOWN PONDS	305623	117683	Main Site	Undesignated site	
WX39	DRINAGH SOUTH AND NORTH PONDS	305600	118088	Main Site	Undesignated site	
WX40	RATHMACNEE LITTLE POND	303840	114373	Main Site	Undesignated site	
WX41	CLOONSHARRAGH	273919	109636	Main Site	Undesignated site	
WX42	MILLBROOK POND	292172	108813	Main Site	Undesignated site	
WX43	DUNCORMICK POND	291925	109212	Main Site	Undesignated site	
WX44	GIBBERPATRICK PONDS	293993	108850	Main Site	Undesignated site	
WX45	BALLYCLEARY WETLANDS	301949	105956	Main Site	Undesignated site	
WX46	KNOCKHOWLIN POND	306084	108350	Main Site	Undesignated site	
WX47	BALLYBOHER POND	305927	108633	Main Site	Undesignated site	
WX48	RING	306516	108527	Main Site	Undesignated site	
WX49	RATHROLAN POND	307255	108530	Main Site	Undesignated site	
WX50	BENNETTSTOWN HEATHS	308468	108971	Main Site	Undesignated site	
WX51	AUGHMORE	310022	109478	Main Site	Undesignated site	
WX52	BALROTHERY UPPER PONDS	308723	108505	Main Site	Undesignated site	
WX53	REEDSTOWN	309129	106573	Main Site	Undesignated site	
WX54	CHURCHTOWN	312980	105463	Main Site	Undesignated site	
WX55	BALLYHITT POND	311182	108647	Main Site	Undesignated site	
WX56	BALLYTRENT POND	313127	108988	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX57	BALLTWITCH GOLF COURSE PONDS	313304	110422	Main Site	Undesignated site	
WX58	HILL CASTLE PONDS	309152	110705	Main Site	Undesignated site	
WX59	BURROW PONDS	309456	116792	Main Site	Undesignated site	
WX60	SLEEDAGH FARM PONDS	299636	114571	Main Site	Undesignated site	
WX61	COOLCOTTS WETLAND	301766	121826	Main Site	Undesignated site	
WX62	CRORY UPPER POND	302413	128443	Main Site	Undesignated site	
WX63	POLLREGAN PONDS AND WETLAND	306482	127350	Main Site	Undesignated site	
WX64	JOHNSTOWN LAKE	307569	125808	Main Site	Undesignated site	
WX65	GLENBOUGH POND	308856	129091	Main Site	Undesignated site	
WX66	BALLINA POND	308057	128991	Main Site	Undesignated site	
WX67	BALLYMORE PONDS	308047	129493	Main Site	Undesignated site	
WX68	COOLRAINEY PONDS	310343	127937	Main Site	Undesignated site	
WX69	BALLYVALLOO UPPER KETTLE HOLE LAKES	311256	130798	Main Site	Undesignated site	
WX70	GREATISLAND POND	268624	116580	Main Site	Undesignated site	
WX71	BALLYEDOCK WET GRASSLAND	269493	116930	Main Site	Undesignated site	
WX72	BALLYSOP POND JFK ARBORETUM	272817	118667	Main Site	PNR, OPW	
WX73	BALLYKEEROGEMORE POND	274278	118414	Main Site	Undesignated site	
WX74	BALLYCULLANE FEN	278725	114864	Main Site	Undesignated site	
WX75	CURRAGHMORE FEN	279287	112564	Main Site	Undesignated site	
WX76	QUITCHERY GREAT POND	288947	112547	Main Site	Undesignated site	
WX77	HARRISTOWN POND	288804	113692	Main Site	Undesignated site	
WX78	LONGGRAIGUE POND	284194	118400	Main Site	Undesignated site	
WX79	SLEVOY POND	287037	118102	Main Site	Undesignated site	
WX80	GARRYRICHARD	284943	119560	Main Site	Undesignated site	
WX81	COOLBOY BALLYLIAMGOW WETLAND	281919	119422	Main Site	Undesignated site	
WX82	SCAR KNOCKTOWN PONDS	293672	111589	Main Site	Undesignated site	
WX83	ROCHESTOWN POND	293062	111654	Main Site	Undesignated site	
WX84	RATHYARK PONDS	297411	110396	Main Site	Undesignated site	
WX85	SEAFIELD GOLF COURSE POND	321048	159538	Main Site	Undesignated site	
WX87	PARKANNESLEY UPPER	318675	147344	Main Site	Undesignated site	
WX88	PEPPARDSCASTLE	318942	145580	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX89	WELLS PONDS	311762	142864	Main Site	Undesignated site	
WX90	ISLAND DUGHLONE	314148	143091	Main Site	Undesignated site	
WX91	BALLYGARRAN POND	315113	141838	Main Site	Undesignated site	
WX92	UPTON POND	317015	142209	Main Site	Undesignated site	
WX93	BALLYSCOUGH	312723	140401	Main Site	Undesignated site	
WX94	GARRYBRAN	312226	140208	Main Site	Undesignated site	
WX95	CROGHAN MOUNTAIN WET HEATH (WEXFORD)	313171	172774	Main Site	Undesignated site	
WX96	NEWTOWN UPPER QUARRY POND	318517	170834	Main Site	Undesignated site	
WX97	BALLYRORY CUTOVER	309485	170736	Main Site	Undesignated site	
WX98	CASTLEWHITE WETLAND	304819	161953	Main Site	Undesignated site	
WX99	BRIDESWELL BIG	304842	160891	Main Site	Undesignated site	
WX100	GORTEEN UPPER	317180	168496	Main Site	Undesignated site	
WX101	BALLYRORY WETLAND	310157	169850	Main Site	Undesignated site	
WX102	ANNAGH LONG	311391	167345	Main Site	Undesignated site	
WX103	BORLEAGH DEMESNE POND	315357	167232	Main Site	Undesignated site	
WX104	CORCANON WETLAND	317873	166456	Main Site	Undesignated site	
WX105	BALLYNESTRAGH DEMESNE POND	315906	164610	Main Site	Undesignated site	
WX106	MUNTNEBO POND	311552	162652	Main Site	Undesignated site	
WX107	BALLYTEGAN POND	316133	161548	Main Site	Undesignated site	
WX108	BALLYRAHAN WETLAND	313205	160960	Main Site	Undesignated site	
WX109	KILLANURE MANDORAN	287100	154430	Main Site	Undesignated site	
WX110	MANDORAN HEATHLAND	287538	153641	Main Site	Undesignated site	
WX111	BOLINAHANEY	296367	158670	Main Site	Undesignated site	
WX112	BALLYROEBUCK WET WOODLAND	298383	155174	Main Site	Undesignated site	
WX113	BALLYBOY	296257	152713	Main Site	Undesignated site	
WX114	GOTEEN TOMATEE	291347	150528	Main Site	Undesignated site	
WX115	KILTILLAHAN	302762	159692	Main Site	Undesignated site	
WX116	CARRIGBEG BALLYREGAN	306562	158935	Main Site	Undesignated site	
WX117	BALLYDARGAN	309802	159501	Main Site	Undesignated site	
WX118	BANNTOWN	309948	157644	Main Site	Undesignated site	
WX119	BOLEY LOWER BALLYSHAUN	307084	156547	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX120	RAHEEN	305026	157816	Main Site	Undesignated site	
WX121	WHITEWELL	307433	152689	Main Site	Undesignated site	
WX122	CRANN NEWTOWN	300341	150678	Main Site	Undesignated site	
WX123	BALLYNABEARNA EAST	278124	136179	Main Site	Undesignated site	
WX124	BALLYNABEARNA WEST HEATH	277694	136733	Main Site	Undesignated site	
WX125	CLONLEIGH WEST	279775	132127	Main Site	Undesignated site	
WX126	BOTHERSTOOKA	276737	132344	Main Site	Undesignated site	
WX127	RATHGAROGE KNOCKROE	277839	130265	Main Site	Undesignated site	
WX128	ROBINSTOWN GREAT	279366	129964	Main Site	Undesignated site	
WX129	ROBINSTOWN LITTLE	279674	129095	Main Site	Undesignated site	
WX130	LACKEN CENTRAL	276864	128298	Main Site	Undesignated site	
WX131	LACKEN NORTH	276921	128835	Main Site	Undesignated site	
WX132	LACKEN SOUTH	277178	127846	Main Site	Undesignated site	
WX133	HEWITSLAND POND	272888	126933	Main Site	Undesignated site	
WX134	SPRINGPARK	279546	127749	Main Site	Undesignated site	
WX135	MILLQUARTER	279808	126031	Main Site	Undesignated site	
WX136	OAKLANDS CAMLIN LAKE - OAKLANDS WOOD pNHA	271122	125629	Main Site	pNHA	000774
WX137	STOKESTOWN EAST - BARROW RIVER ESTUARY pNHA	270234	123988	Sub-site	pNHA	000698
WX138	STOKESTOWN SOUTH	270274	122498	Main Site	Undesignated site	
WX139	CARNAGH POND AND WOODLAND	277464	122607	Main Site	Undesignated site	
WX140	TINNACARRICK	279064	122619	Main Site	Undesignated site	
WX141	RATHNAGEERAGH NORTH	278969	121844	Main Site	Undesignated site	
WX142	RATHNAGEERAGH NASH	278547	120514	Main Site	Undesignated site	
WX143	NASH	277462	121136	Main Site	Undesignated site	
WX144	TELLAROUGHT	275970	120869	Main Site	Undesignated site	
WX145	BALLYMACLARE EAST	274488	121850	Main Site	Undesignated site	
WX146	SLIEVECOILTIA COMMONS HEATH	272603	121049	Main Site	Undesignated site	
WX147	OLDCOURT	271410	122039	Main Site	Undesignated site	
WX149	TEMPLESHELIN WEST	282734	128299	Main Site	Undesignated site	
WX150	TEMPLESHELIN EAST	284200	128495	Main Site	Undesignated site	
WX151	DOONOONEY	289748	128977	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX152	TOMFARNEY UPPER	290185	129083	Main Site	Undesignated site	
WX153	GALBALLY	292231	128059	Main Site	Undesignated site	
WX154	KEREIGHT	295341	128982	Main Site	Undesignated site	
WX155	SHANAHONA TINNAKILLA	296522	129340	Main Site	Undesignated site	
WX156	REDDINA BALLYHOGE	297696	127824	Main Site	Undesignated site	
WX157	NEWTOWN UPPER	299353	126494	Main Site	Undesignated site	
WX158	BALLINCLAY UPPER	292610	126808	Main Site	Undesignated site	
WX159	RATHKYLE CUTOVER FEN	290243	126320	Main Site	Undesignated site	
WX160	NEWTOWN FEN	288468	127884	Main Site	Undesignated site	
WX161	TEMPLESHELIN SOUTH	284218	126894	Main Site	Undesignated site	
WX162	MOORFIELDS	280506	125456	Main Site	Undesignated site	
WX163	BALLYSHANNON	285191	125384	Main Site	Undesignated site	
WX164	CAMAROSS PINGOS	289174	124774	Main Site	SGI	
WX165	POLEHORE NORTH	298114	124865	Main Site	Undesignated site	
WX166	POLEHORE SOUTH	298023	123850	Main Site	Undesignated site	
WX167	MULLINREE	299267	122867	Main Site	Undesignated site	
WX168	BREGORTEEN	295934	122732	Main Site	Undesignated site	
WX169	HARRISTOWN LITTLE BALLYHENNIGAN OLDBOLEY	292409	122117	Main Site	SGI	
WX170	BALLYCLEMOCK	286150	123055	Main Site	Undesignated site	
WX171	RATHSILLAGH ASSAGART	285766	123752	Main Site	Undesignated site	
WX172	DUNGEER BALLYBEG MULMONTRY WET WOODLAND	290907	121773	Main Site	SGI	
WX173	GARRADREEN	295472	120174	Main Site	Undesignated site	
WX174	COURTOWN GOLF COURSE PONDS	319755	157867	Main Site	Undesignated site	
WX175	BALLINACUR	310538	156073	Main Site	Undesignated site	
WX176	TOBERANIERIN UPPER	311531	153570	Main Site	Undesignated site	
WX177	BALCARRIGHILL	311496	151047	Main Site	Undesignated site	
WX178	COOLBAUN	300616	148771	Main Site	Undesignated site	
WX179	FERNS LOWER CREATED WETLAND	302547	149361	Main Site	Undesignated site	
WX180	CRONYHORN	305920	148529	Main Site	Undesignated site	
WX181	BALLYREGAN	309102	148553	Main Site	Undesignated site	
WX182	BALLYTRACEY MONAGREANY LOWER	308448	146706	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX183	BALLYDONIGAN	304103	144873	Main Site	Undesignated site	
WX184	RAHEENDARRIG	308761	144902	Main Site	Undesignated site	
WX185	GARRYDUFF BALLINCASH LOWER	306246	143277	Main Site	Undesignated site	
WX186	GARRYBRIT LOWER	306072	143714	Main Site	Undesignated site	
WX187	SOLSBOROUGH WET WOODLAND	300289	142451	Main Site	Undesignated site	
WX188	BALLYMOTY BEG & MORE	304287	140974	Main Site	Undesignated site	
WX189	MONAWILLING LOWER	307219	140585	Main Site	Undesignated site	
WX190	BOLABEG	290391	149929	Main Site	Undesignated site	
WX191	TOMADILLY	295580	145332	Main Site	Undesignated site	
WX193	ASKUNSHIN	293807	142509	Main Site	Undesignated site	
WX194	PULLINSTOWN LITTLE	293049	143805	Main Site	Undesignated site	
WX195	MOYNE LOWER	297715	143416	Main Site	Undesignated site	
WX196	FORGELANDS SOUTH LAKE	294532	140123	Main Site	Undesignated site	
WX197	FORGELANDS NORTH WETLAND	295112	140904	Main Site	Undesignated site	
WX198	KILLOUGHRUM WET WOODLAND pNHA	290337	141674	Main Site	pNHA	000765
WX199	BALLYCRYSTAL RIPARIAN WOODLAND - BLACKSTAIRS MOUNTAINS SAC	286208	149150	Sub-site	pNHA, SAC	000770
WX200	BOLADURRAGH WET WOODLAND	287049	149460	Main Site	Undesignated site	
WX201	KILTEALY NORTH WETLAND	283837	147537	Main Site	Undesignated site	
WX202	KILTEALY SOUTH WETLAND	285240	145566	Main Site	Undesignated site	
WX203	KNOCKATOBER	282792	142919	Main Site	Undesignated site	
WX204	MANGAN	289171	143677	Main Site	Undesignated site	
WX205	KILLOUGHRUM	290217	143284	Main Site	Undesignated site	
WX206	MILLTOWN GLENGLASS	285260	140786	Main Site	Undesignated site	
WX207	BALLINESKER KETTLE HOLE LAKE	311595	129266	Main Site	Undesignated site	
WX208	KILMACOE KETTLE HOLE LAKES	310920	129155	Main Site	Undesignated site	
WX209	BALLYVALLOO LOWER KETTLE HOLE LAKES	311986	130457	Main Site	Undesignated site	
WX210	BALLYNACLASH KETTLE HOLE LAKES	312907	131436	Main Site	Undesignated site	
WX212	BALLINROOAUN SOUTH KETTLE HOLE LAKES	309584	130771	Main Site	Undesignated site	
WX213	BALLINROOAUN NORTH KETTLE HOLE LAKE EAST	308941	130752	Main Site	Undesignated site	
WX214	BALLINROOAUN NORTH KETTLE HOLE LAKE WEST	308523	130663	Main Site	Undesignated site	
WX215	NEWPORT KETTLE HOLE LAKES	309246	131804	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX216	BALLINRA KETTLE HOLE LAKES	309597	131772	Main Site	Undesignated site	
WX217	BARNARIDDERY KETTLE HOLE LAKES	310524	131309	Main Site	Undesignated site	
WX218	BALLINA LOWER KETTLE HOLE LAKES	311918	131219	Main Site	Undesignated site	
WX220	BALLINA KETTLE HOLE LAKES	310619	132394	Main Site	Undesignated site	
WX221	GARRYVADDEN UPPER KETTLE HOLE LAKES	311129	132337	Main Site	Undesignated site	
WX222	INCH UPPER KETTLE HOLE LAKES	312092	132091	Main Site	Undesignated site	
WX223	GARRYVADDEN LOWER KETTLE HOLE LAKES	310520	132626	Main Site	Undesignated site	
WX224	BALYROE (NUNN) KETTLE HOLE LAKES	309103	132479	Main Site	Undesignated site	
WX225	BALLYROE (ANNESLEY) KETTLE HOLE LAKES	309657	132565	Main Site	Undesignated site	
WX226	KNOCKBAUN	311267	133718	Main Site	Undesignated site	
WX227	KNOCKNASILLOGE PONDS	314790	134730	Main Site	Undesignated site	
WX228	COURTCLOUGH LOWER POND	310426	137699	Main Site	Undesignated site	
WX229	BALLINGOWAN NORTH WETLAND	311905	137718	Main Site	Undesignated site	
WX230	BALLYTARSNA WETLAND	311495	138091	Main Site	Undesignated site	
WX232	GARRAUN POND	313176	137581	Main Site	Undesignated site	
WX233	GARRAUN WETLAND	312991	137346	Main Site	Undesignated site	
WX234	BALLYVOODOCK WEST WETLAND	313629	136753	Main Site	Undesignated site	
WX235	MONANARRIG	312764	136288	Main Site	Undesignated site	
WX236	BALLYVOODOCK EAST WETLAND	314206	136822	Main Site	Undesignated site	
WX237	BALLYVALDON POND NORTH	314981	136851	Main Site	Undesignated site	
WX238	BALLYVALDON POND SOUTH	314896	136645	Main Site	Undesignated site	
WX239	BALLINTUBBRID WETLAND	315124	137616	Main Site	Undesignated site	
WX240	GARRAUN KILNEW KETTLE HOLES	314396	137425	Main Site	Undesignated site	
WX241	BALLYNADRISHOGE POND	316066	136560	Main Site	Undesignated site	
WX242	BALLYNAMONA SOUTH POND	316403	137075	Main Site	Undesignated site	
WX243	BALLYNAMONA NORTH PONDS	316242	137686	Main Site	Undesignated site	
WX244	KILLINCOOLY MORE KETTLE HOLES	316056	138564	Main Site	Undesignated site	
WX245	KILLINCOOLY MORE WETLAND	316599	138429	Main Site	Undesignated site	
WX246	BALLYADAM WETLAND	315263	139855	Main Site	Undesignated site	
WX247	BALLYDUFF PONDS	314550	139345	Main Site	Undesignated site	
WX248	BALLYMACSIMON POND	315873	139031	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX249	BALLYNAHASK PONDS	315158	138558	Main Site	Undesignated site	
WX250	BALLINGOWAN PONDS	312203	138080	Main Site	Undesignated site	
WX251	TOMNAFUNSHOGE	301178	139658	Main Site	Undesignated site	
WX252	COOLADINE KILPIERCE	301951	139291	Main Site	Undesignated site	
WX253	GARRANTROWLAN NORTH	303287	139559	Main Site	Undesignated site	
WX254	GARRANTROWLAN SOUTH	303255	138962	Main Site	Undesignated site	
WX255	GARRYMILE	304172	139404	Main Site	Undesignated site	
WX256	COURTCLOGH POND NORTH	309714	137595	Main Site	Undesignated site	
WX257	COURTCLOGH PONDS SOUTH	309290	137230	Main Site	Undesignated site	
WX258	ASKABEG	309034	137039	Main Site	Undesignated site	
WX259	SLIEVNAGRANE	307309	137505	Main Site	Undesignated site	
WX260	TINRAHEEN	306360	136035	Main Site	Undesignated site	
WX261	TINRAHEEN KILLISK WETLAND	305704	136513	Main Site	Undesignated site	
WX262	CLONMORE UPPER BALLYBEG	303136	137153	Main Site	Undesignated site	
WX263	CLONMORE UPPER BALLYNASTRAW	302229	136627	Main Site	Undesignated site	
WX264	BALLYCOURCY MORE	300081	137094	Main Site	Undesignated site	
WX265	KILLISK POND NORTH	306123	134626	Main Site	Undesignated site	
WX266	TINRAHEEN POND	306482	135654	Main Site	Undesignated site	
WX267	KNOCKNAVEY	307818	135429	Main Site	Undesignated site	
WX268	BALLYNAMONA WETLAND	308227	134724	Main Site	Undesignated site	
WX269	BALLYROE (ANNESLEY) PONDS	308060	132783	Main Site	Undesignated site	
WX270	BALLYROE (NUNN) PONDS	309282	132664	Main Site	Undesignated site	
WX271	BALLINTAGGART POND	308005	132568	Main Site	Undesignated site	
WX272	BALLYROE (NUNN) WETLAND	308856	132815	Main Site	Undesignated site	
WX273	GARRYTINODAGH POND	306379	133080	Main Site	Undesignated site	
WX274	BALLYBEG GREAT PONDS	307257	133483	Main Site	Undesignated site	
WX275	BALLYBEG GREAT PONDS NORTH	306862	133686	Main Site	Undesignated site	
WX276	BALLYBEG GREAT WETLAND	307068	133078	Main Site	Undesignated site	
WX277	KILLISK PONDS SOUTH	306541	133726	Main Site	Undesignated site	
WX278	BALLINA UPPER BALLYLUCAS	305217	133664	Main Site	Undesignated site	
WX279	BALLYLUCAS KETTLE HOLE LAKES	305016	132653	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX280	BALLINKEEL POND NORTH	303026	133878	Main Site	Undesignated site	
WX281	BALLINKEEL POND SOUTH	302648	133558	Main Site	Undesignated site	
WX282	BALLYMURN UPPER	301207	132629	Main Site	Undesignated site	
WX283	CLONNASHEEOGE KETTLE HOLE LAKES	304741	131003	Main Site	Undesignated site	
WX284	GARRYHUBBOCK PONDS	305827	131190	Main Site	Undesignated site	
WX285	KILLELAN KETTLE HOLE LAKES	305479	130909	Main Site	Undesignated site	
WX286	GARRYVARREN	304678	130384	Main Site	Undesignated site	
WX287	BARRYLOUGH LOWER BALLYHEIGE WETLAND	307329	131177	Main Site	Undesignated site	
WX288	RATHTURTIN	281209	131212	Main Site	Undesignated site	
WX289	RATHTURTIN SOUTH	282565	130374	Main Site	Undesignated site	
WX290	RATHTURTIN EAST	284270	131212	Main Site	Undesignated site	
WX291	TOMFARNEY	287217	131100	Main Site	Undesignated site	
WX292	KELLYSTOWN POND	289154	130826	Main Site	Undesignated site	
WX293	KELLYSTOWN WETLAND WEST	289469	131346	Main Site	Undesignated site	
WX294	CHAPEL WETLAND EAST	288468	131452	Main Site	Undesignated site	
WX295	KELLYSTOWN WETLAND NORTH	290186	131769	Main Site	Undesignated site	
WX296	CLONLEIGH NORTH	280365	132722	Main Site	Undesignated site	
WX297	BALLINDONEY A	281278	135804	Main Site	Undesignated site	
WX298	KILLEGNEY	284402	135042	Main Site	Undesignated site	
WX299	FORRESTALSTOWN	285380	136327	Main Site	Undesignated site	
WX300	BALLINDONEY B	281058	136273	Main Site	Undesignated site	
WX301	MONAMOLIN	280832	138739	Main Site	Undesignated site	
WX302	TOMANINE	282233	138957	Main Site	Undesignated site	
WX303	RATHFYLANE	288307	138672	Main Site	Undesignated site	
WX304	KILTREA TEMPLESCOBY	292569	139754	Main Site	Undesignated site	
WX305	TOMDUFF	296217	139135	Main Site	Undesignated site	
WX306	BROWNSWOOD QUARRY LAKE SOUTH	298105	136333	Main Site	Undesignated site	
WX307	BROWNSWOOD QUARRY LAKE NORTH	297916	137148	Main Site	Undesignated site	
WX308	BALLYNAPIERCE	295699	137167	Main Site	Undesignated site	
WX309	BALLYGILLSTOWN	292983	137412	Main Site	Undesignated site	
WX310	DAVIDSTOWN	293218	135734	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX311	BALLYBRENNAN WET WOODLAND	306738	113221	Main Site	Undesignated site	
WX312	KILDAVIN LOWER WET WOODLAND	300832	116534	Main Site	Undesignated site	
WX313	LITTERBEG WET WOODLAND	316785	141272	Main Site	Undesignated site	
WX314	ISLAND HOUSE WET WOODLAND	313257	140162	Main Site	Undesignated site	
WX315	GARRYLOUGH LOWER WET WOODLAND	307148	129804	Main Site	Undesignated site	
WX316	BALLYNABARNEY WOOD pNHA - SLANEY RIVER VALLEY SAC	299600	141178	Sub-site	SAC, pNHA	000746 000781
WX317	GRAIGUEBEG BOG WOODLAND	296092	156592	Main Site	Undesignated site	
WX318	KNOCKBRANDON UPPER POND	307696	162608	Main Site	Undesignated site	
WX320	FERRYCARRIG HERITAGE PARK WETLANDS	301103	122806	Main Site	PNR	
WX321	CHURCHLANDS FARM POND	300793	112043	Main Site	Undesignated site	
WX322	LOUGHGUNNEN GREAT FARM POND	300815	113330	Main Site	Undesignated site	
WX323	FARDYSTOWN FARM POND	300061	113869	Main Site	Undesignated site	
WX324	BARGY COMMONS POND	298178	116707	Main Site	Undesignated site	
WX325	BALLYCONNICK QUARRY POND	294074	113557	Main Site	Undesignated site	
WX326	BARMONEY QUARRY POND	290786	127025	Main Site	Undesignated site	
WX330	COROCK RIVER MARSH - BANNOW BAY SAC SPA	286035	114818	Sub-site	cNHA, RAM , SAC, WS	
WX331	HOLMESTOWN POND	297200	123481	Main Site	Undesignated site	
WX332	BALLYDICKIN UPPER POND	297973	127014	Main Site	Undesignated site	
WX333	BARROW RIVER ESTUARY pNHA	269103	123759	Main Site	pNHA	000698
WX334	BALLINDAGGAN POND	292277	292277	Main Site	Undesignated site	
WX335	MONAMOLIN POND	308158	147665	Main Site	Undesignated site	
WX336	TINCURRY BALLYCARNEY POND EAST	299406	147891	Main Site	Undesignated site	
WX337	TINCURRY BALLYCARNEY POND WEST	297810	147839	Main Site	Undesignated site	
WX338	BALLYLARKIN ATTENUATION POND	321163	167886	Main Site	Undesignated site	
WX339	CROGHAN MIDDLE WETLAND	314441	170311	Main Site	Undesignated site	
WX340	KILGORMAN POND	322597	164109	Main Site	Undesignated site	
WX341	KILDERMOT POND	321346	160806	Main Site	Undesignated site	
WX342	GOREY EAST PONDS	317623	159935	Main Site	Undesignated site	
WX343	MARLFIELD HOUSE POND	316667	158942	Main Site	Undesignated site	
WX344	DRUMDERRY AND CARLOW QUARRY PONDS	290301	158147	Main Site	Undesignated site	
WX345	CLOBEMAN HALL POND	296048	151126	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX346	KILLENAGH POND	314850	147482	Main Site	Undesignated site	
WX347	BALLINASTRAW UPPER POND	312510	147041	Main Site	Undesignated site	
WX348	ENNISCORTHY BYPASS ATTENUATION POND	294254	141736	Main Site	Undesignated site	
WX349	CORRAGEEN POND	280858	141616	Main Site	Undesignated site	
WX350	BALLYBAUN POND	280739	139792	Main Site	Undesignated site	
WX351	CLOHASS ATTENUATION POND	293431	138808	Main Site	Undesignated site	
WX352	BALLYLEIGH RESERVOIR POND	275294	133885	Main Site	Undesignated site	
WX353	POULMARL POND	292178	120275	Main Site	Undesignated site	
WX354	HORETOWN NORTH WETLAND	286824	121091	Main Site	Undesignated site	
WX355	AUGHERMON QUARRY POND	290511	116002	Main Site	Undesignated site	
WX356	GRANGE CARRICK PONDS	286140	109391	Main Site	Undesignated site	
WX357	AMBROSETOWN QUARRY POND	290947	111109	Main Site	Undesignated site	
WX358	CULLENSTOWN WEST WETLAND	286872	108082	Main Site	Undesignated site	
WX359	TAGOAT IOAC POND	310627	111524	Main Site	Undesignated site	
WX360	HOBBINSTOWN QUARRY PONDS	303907	112989	Main Site	Undesignated site	
WX361	SOLSBOROUGH ATTENUATION POND	300794	142284	Main Site	Undesignated site	
WX362	BALLYNAHALLIN ATTENUATION POND	298396	144469	Main Site	Undesignated site, pNHA	
WX363	BALLYBRANNIS ATTENUATION POND	293572	140529	Main Site	Undesignated site	
WX364	GLENTEIGE SOUTH ATTENUATION POND	299381	134388	Main Site	Undesignated site	
WX365	GLENTEIGE NORTH ATTENUATION POND	299606	134965	Main Site	Undesignated site	
WX366	DRUMGOLD LOWER ATTENUATION POND	299957	138591	Main Site	Undesignated site	
WX367	BALLYNABARNY ATTENUATION POND	300980	140659	Main Site	Undesignated site	
WX368	ENNISCORTHY EAST ATTENUATION POND	299654	141956	Main Site	Undesignated site	
WX369	BALLYNAHALLIN SOUTH ATTENUATION POND	298979	143005	Main Site	Undesignated site	
WX370	KNOCKAVOCKA ATTENUATION POND	304157	146756	Main Site	Undesignated site	
WX371	BALLYCARRIGEEN LOWER ATTENUATION POND	305605	147903	Main Site	Undesignated site	
WX372	QUARRY ATTENUATION POND	306775	148709	Main Site	Undesignated site	
WX373	KNOCKROBIN LOWER ATTENUATION POND	308677	150991	Main Site	Undesignated site	
WX374	KILLABEG POND	299181	144589	Main Site	Undesignated site	
WX375	CLONMORE COURT ATTENUATION POND	310352	153338	Main Site	Undesignated site	
WX376	HAGGARD PONDS NORTH	276604	112378	Main Site	Undesignated site	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Designation	Designated Site Code
WX377	JOHNSTOWN EPA PONDS	302355	116970	Main Site	Undesignated site	

Appendix 4

Site Evaluation Criteria

Modified from National Roads Authority (2009). Guidelines for Assessment of Ecological Impacts of National Roads Schemes.

Rating	Importance of Ecological Sites
A	**Internationally important** Sites designated (or qualifying for designation) as SAC* or SPA* under the EU Habitats or Birds Directives. Undesignated sites containing good examples of Annex I priority habitats under the EU Habitats Directive. Sites designated (or qualifying for designation) as SAC* for salmonids or Annex II species under the EU Habitats Directives. Major salmon river fisheries. Major salmonid (salmon, trout or char) lake fisheries.
B	**Nationally important** • Sites or waters designated or proposed as an NHA* or statutory Nature Reserves. • Undesignated sites containing good examples of Annex I habitats (under EU Habitats Directive). • Undesignated sites containing significant numbers of resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive or species protected under the Wildlife (Amendment) Act 2000. • Major trout river fisheries. • Water bodies with major amenity fishery value. • Commercially important coarse fisheries.
C+	**County value** Area of Special Amenity. Area subject to a Tree Preservation Order. Area of High Amenity, or equivalent, designated under the County Development Plan. Resident or regularly occurring populations (assessed to be important at the County level) of the following: • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; • Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; • Species protected under the Wildlife Acts; and/or • Species listed on the relevant Red Data list. Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance. County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP, if this has been prepared. Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
C	**High value, locally important** Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or significant populations of locally rare species. Sites containing any resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive. Small water bodies with known salmonid populations or with good potential salmonid habitat. Large water bodies with some coarse fisheries value.
D	**Moderate value, locally important** Sites containing some semi-natural habitat or locally important for wildlife. Small water bodies with some coarse fisheries value or some potential salmonid habitat. Any water body with unpolluted water (Q-value rating 4-5).
E	**Low value, locally important** Artificial or highly modified habitats with low species diversity and low wildlife value. Water bodies with no current fisheries value and no significant potential fisheries value.
F	**Unknown Value** Sites of possible ecological value which require further investigation at the optimum season to establish importance. Sites of possible fisheries value requiring further survey.

** SAC = Special Area of Conservation, SPA = Special Protection Area, NHA = Natural Heritage Area*

Appendix 5

County Wexford Wetland Survey Site List Summary

For a complete list of all data held on each of the sites within the Site Database see the Excel file (Wexford All Data Sites.xls) included with the project deliverables.

List is presented sorted by site code.

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX1	RIVER BARROW AND RIVER NORE SAC (WEXFORD)	268146	117488	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2009	SAC, pNHA	002162	A Rating: Internationally Important	
WX2	KILCORAAL FEN cNHA	306300	129100	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	1990s	cNHA	002906	B Rating: Nationally Important	7.997039235
WX3	SCREEN HILLS SAC	310310	129332	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2018	SAC, ASI, SGI	000708	A Rating: Internationally Important	
WX4	SALTEE ISLANDS SAC SPA	295000	97000	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2018	SPA, SAC, ASI, SGI	004002 / SAC 000707	A Rating: Internationally Important	
WX5	WEXFORD SLOBS AND HARBOUR SAC SPA	308000	124000	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2018	pNHA, SAC, SPA, ASI, NNR, RAM , cNHA, SGI	000781 / 000712 / 004076	A Rating: Internationally Important	
WX6	BALLYKELLY MARSH pNHA	271155	121284	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	1990s	pNHA	000744	B Rating: Nationally Important	
WX7	COOLTEEN WETLAND cNHA	295231	122943	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	1973	cNHA	002700	B Rating: Nationally Important	3.713506456

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX8	BOLEY FEN pNHA	278261	116791	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	1990s	pNHA	000699	B Rating: Nationally Important	
WX9	BALLYROE FEN AND LAKE pNHA	309849	132712	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	1990s	ASI, pNHA	000747	B Rating: Nationally Important	
WX10	BLACKSTAIRS MOUNTAINS SAC (WEXFORD)	284144	152736	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2019	SAC, ASI, SMR, SGI	000770	A Rating: Internationally Important	
WX11	SLANEY RIVER VALLEY SAC (WEXFORD)	297568	131722	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2013	pNHA, SAC, WS	000781	A Rating: Internationally Important	
WX12	KILPATRICK SANDHILLS SAC	324820	165821	Main Site	NPWS Foss 2007 Study of the extent and conservation status of Springs, Fens and Flushes in Ireland	YES	2018	SAC, SGI	001742	A Rating: Internationally Important	
WX13	FORTH MOUNTAIN pNHA	298035	119294	Main Site	Irish Peatland Conservation Council 2009 Peatland site list	YES	2018	pNHA, ASI, SGI	000761	B Rating: Nationally Important	
WX14	TACUMSHIN LAKE SAC SPA	304100	106500	Main Site	Irish Peatland Conservation Council 2009 Peatland site list	YES	2022	SAC, SPA, ASI, WS, SGI	000709	A Rating: Internationally Important	
WX15	BALLYTEIGE BURROW SAC SPA	293000	106000	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2018	SAC, NNR, SPA, ASI, pNHA, SGI	000696 004020	A Rating: Internationally Important	
WX16	BANNOW BAY SAC SPA	283000	110000	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2018	SAC, SPA, ASI, RAM , cNHA, WS, SGI	000697 005179 004033	A Rating: Internationally Important	

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX17	CAHORE POLDERS AND DUNES SAC SPA	320961	144847	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2018	SAC, SPA, SGI	000700	A Rating: Internationally Important	
WX18	LADYS ISLAND LAKE SAC SPA	310000	106000	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2022	SAC, SPA, ASI, SGI	000704 004009	A Rating: Internationally Important	
WX19	RAVEN POINT NATURE RESERVE SAC SPA	311000	123000	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2022	SAC, NNR, SPA, ASI, RAM , SGI	000710	A Rating: Internationally Important	
WX20	KILMUCKRIDGE - TINNABERNA SANDHILLS SAC	318571	139864	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	1990s	SAC	001741	A Rating: Internationally Important	
WX21	BARROW SALT MEADOWS - RIVER BARROW AND RIVER NORE SAC	268000	117000	Sub-site	An Foras Forbartha 1981 National Heritage Inventory. Areas of Scientific Interest in Ireland.	YES	1990s	ASI, pNHA, SAC	000698 002162	A Rating: Internationally Important	
WX22	CURRACLOE - WEXFORD SLOBS AND HARBOUR pNHA	311000	127000	Main Site	An Foras Forbartha 1981 National Heritage Inventory. Areas of Scientific Interest in Ireland.	YES	2018	ASI, pNHA, SPA, SAC, SGI	000712	B Rating: Nationally Important	
WX23	MACMINE MARSHES - SLANEY RIVER VALLEY SAC	298000	132000	Sub-site	An Foras Forbartha 1981 National Heritage Inventory. Areas of Scientific Interest in Ireland.	YES	1990s	ASI		A Rating: Internationally Important	
WX24	CASTLEBRIDGE MARSH - SLANEY RIVER VALLEY SAC	304964	126470	Sub-site	An Foras Forbartha 1981 National Heritage Inventory. Areas of Scientific Interest in Ireland.	YES	1990s	ASI, SAC, pNHA, SPA	000712 004076 000781	A Rating: Internationally Important	
WX25	URRIN HEADWATERS	286000	148000	Main Site	An Foras Forbartha 1981 National Heritage Inventory. Areas of Scientific Interest in Ireland.	YES	NA	ASI		C+ Rating: County Conservation value	14.46095607

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX26	RIVERBANK AT NEW ROSS - RIVER BARROW AND RIVER NORE SAC	272000	128000	Sub-site	An Foras Forbartha A Preliminary County Report on the Areas of Scientific Interest.	YES	1990s	ASI, SAC		A Rating: Internationally Important	
WX27	KILGORMAN RIVER MARSH pNHA	323082	163944	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2009	pNHA	001834	B Rating: Nationally Important	
WX28	BALLYTEIGE MARSH pNHA	319850	142634	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2009	pNHA	001930	B Rating: Nationally Important	
WX29	CASTLETALBOT LAKE	312112	134781	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	PNR		F Rating: Unknown value - survey required	6.163906193
WX30	TINNICK PONDS	312557	137813	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.280812509
WX31	INCH POND	312499	133042	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.465236383
WX32	NEWBAY LAKE	300772	120387	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	8.142886223
WX33	SHELMALIERE COMMONS LAKE	298548	120351	Main Site	Aerial photographic Survey Discovery 2013	YES	2018	LAP, SGI		F Rating: Unknown value - survey required	17.9704055
WX34	JOHNSTOWN CASTLE LAKES	302075	116507	Main Site	Aerial photographic Survey Discovery 2013	YES	2022	PNR		D Rating: Local conservation value (moderate value)	7.966729106

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX35	LEVITSTOWN LAKES	303916	117023	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.072755484
WX36	POLLSALLAGH LAKE	303618	116109	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.672050497
WX37	KERLOGUE LAKE	305125	119340	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	8.940227032
WX38	WHITESTOWN AND BOGGANSTOWN PONDS	305623	117683	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.220571915
WX39	DRINAGH SOUTH AND NORTH PONDS	305600	118088	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.058025126
WX40	RATHMACNEE LITTLE POND	303840	114373	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.37897184
WX41	CLOONSHARRAGH	273919	109636	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.389540069
WX42	MILLBROOK POND	292172	108813	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.769404491
WX43	DUNCORMICK POND	291925	109212	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.292764006

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX44	GIBBERPATRICK PONDS	293993	108850	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.177114961
WX45	BALLYCLEARY WETLANDS	301949	105956	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	50.7312004
WX46	KNOCKHOWLIN POND	306084	108350	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.329724431
WX47	BALLYBOHER POND	305927	108633	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.084300745
WX48	RING	306516	108527	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.106355667
WX49	RATHROLAN POND	307255	108530	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.052833199
WX50	BENNETTSTOWN HEATHS	308468	108971	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	0.119589641
WX51	AUGHMORE	310022	109478	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.662229216
WX52	BALROTHERY UPPER PONDS	308723	108505	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.335712656

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX53	REEDSTOWN	309129	106573	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.125846117
WX54	CHURCHTOWN	312980	105463	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	9.363379355
WX55	BALLYHITT POND	311182	108647	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.327946902
WX56	BALLYTRENT POND	313127	108988	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.196951953
WX57	BALLTWITCH GOLF COURSE PONDS	313304	110422	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.725266756
WX58	HILL CASTLE PONDS	309152	110705	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.483342584
WX59	BURROW PONDS	309456	116792	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.197350949
WX60	SLEEDAGH FARM PONDS	299636	114571	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.35350667
WX61	COOLCOTTS WETLAND	301766	121826	Main Site	Aerial photographic Survey Discovery 2013	YES	2012	Undesignated site		F Rating: Unknown value - survey required	32.12741038

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX62	CRORY UPPER POND	302413	128443	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.275525172
WX63	POLLREGAN PONDS AND WETLAND	306482	127350	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	32.87794185
WX64	JOHNSTOWN LAKE	307569	125808	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.649901361
WX65	GLENBOUGH POND	308856	129091	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.168658083
WX66	BALLINA POND	308057	128991	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.347701478
WX67	BALLYMORE PONDS	308047	129493	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.283060245
WX68	COOLRAINEY PONDS	310343	127937	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.851707226
WX69	BALLYVALLOO UPPER KETTLE HOLE LAKES	311256	130798	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.703460745
WX70	GREATISLAND POND	268624	116580	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.987732926

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX71	BALLYEDOCK WET GRASSLAND	269493	116930	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	17.79238509
WX72	BALLYSOP POND JFK ARBORETUM	272817	118667	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	PNR, OPW		E Rating: Local conservation value (low value)	0.481625992
WX73	BALLYKEEROGEMORE POND	274278	118414	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	26.16373988
WX74	BALLYCULLANE FEN	278725	114864	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.83315463
WX75	CURRAGHMORE FEN	279287	112564	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	11.56348785
WX76	QUITCHERY GREAT POND	288947	112547	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.194183831
WX77	HARRISTOWN POND	288804	113692	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.269249152
WX78	LONGGRAIGUE POND	284194	118400	Main Site	Aerial photographic Survey Discovery 2013	YES	2022	Undesignated site		F Rating: Unknown value - survey required	1.391332063
WX79	SLEVOY POND	287037	118102	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.95390059

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX80	GARRYRICHARD	284943	119560	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	13.09017426
WX81	COOLBOY BALLYLIAMGOW WETLAND	281919	119422	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	19.39974924
WX82	SCAR KNOCKTOWN PONDS	293672	111589	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.913863608
WX83	ROCHESTOWN POND	293062	111654	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.253102947
WX84	RATHYARK PONDS	297411	110396	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	8.934888641
WX85	SEAFIELD GOLF COURSE POND	321048	159538	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.172987654
WX87	PARKANNESLEY UPPER	318675	147344	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	22.1173644
WX88	PEPPARDSCASTLE	318942	145580	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.201502836
WX89	WELLS PONDS	311762	142864	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.552736829

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX90	ISLAND DUGHLONE	314148	143091	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.608468982
WX91	BALLYGARRAN POND	315113	141838	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.074957683
WX92	UPTON POND	317015	142209	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.646326195
WX93	BALLYSCOUGH	312723	140401	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	13.36072398
WX94	GARRYBRAN	312226	140208	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.107028502
WX95	CROGHAN MOUNTAIN WET HEATH (WEXFORD)	313171	172774	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	268.4733666
WX96	NEWTOWN UPPER QUARRY POND	318517	170834	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.270882772
WX97	BALLYRORY CUTOVER	309485	170736	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	43.73519112
WX98	CASTLEWHITE WETLAND	304819	161953	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.25121424

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX99	BRIDESWELL BIG	304842	160891	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.060497187
WX100	GORTEEN UPPER	317180	168496	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.610711232
WX101	BALLYRORY WETLAND	310157	169850	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	11.85689536
WX102	ANNAGH LONG	311391	167345	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.138444481
WX103	BORLEAGH DEMESNE POND	315357	167232	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.547788657
WX104	CORCANON WETLAND	317873	166456	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.273308022
WX105	BALLYNESTRAGH DEMESNE POND	315906	164610	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.568830939
WX106	MUNTNEBO POND	311552	162652	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.57874808
WX107	BALLYTEGAN POND	316133	161548	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.218919233

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX108	BALLYRAHAN WETLAND	313205	160960	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.756413597
WX109	KILLANURE MANDORAN	287100	154430	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	27.35311969
WX110	MANDORAN HEATHLAND	287538	153641	Main Site	Aerial photographic Survey Discovery 2013	YES	2012	Undesignated site		F Rating: Unknown value - survey required	35.34402463
WX111	BOLINAHANEY	296367	158670	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.865692911
WX112	BALLYROEBUCK WET WOODLAND	298383	155174	Main Site	Aerial photographic Survey Discovery 2013	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	9.760152158
WX113	BALLYBOY	296257	152713	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.049843715
WX114	GOTEEN TOMATEE	291347	150528	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	8.863065751
WX115	KILTILLAHAN	302762	159692	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.154361262
WX116	CARRIGBEG BALLYREGAN	306562	158935	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.464950786

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX117	BALLYDARGAN	309802	159501	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.60985948
WX118	BANNTOWN	309948	157644	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.308897117
WX119	BOLEY LOWER BALLYSHAUN	307084	156547	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.288985145
WX120	RAHEEN	305026	157816	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	7.73720255
WX121	WHITEWELL	307433	152689	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.209063776
WX122	CRANN NEWTOWN	300341	150678	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.798728683
WX123	BALLYNABEARNA EAST	278124	136179	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	14.85526995
WX124	BALLYNABEARNA WEST HEATH	277694	136733	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	36.75299667
WX125	CLONLEIGH WEST	279775	132127	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	25.99234817

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WX126	BOTHERSTOOKA	276737	132344	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.911602744
WX127	RATHGAROGE KNOCKROE	277839	130265	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.68553366
WX128	ROBINSTOWN GREAT	279366	129964	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	7.868597133
WX129	ROBINSTOWN LITTLE	279674	129095	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	4.843590877
WX130	LACKEN CENTRAL	276864	128298	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.547212188
WX131	LACKEN NORTH	276921	128835	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.357906586
WX132	LACKEN SOUTH	277178	127846	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.949719807
WX133	HEWITSLAND POND	272888	126933	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland unlikely	NA	Undesignated site		F Rating: Unknown value - survey required	1.171900241
WX134	SPRINGPARK	279546	127749	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.14198651

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WX135	MILLQUARTER	279808	126031	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.057510839
WX136	OAKLANDS CAMLIN LAKE - OAKLANDS WOOD pNHA	271122	125629	Main Site	Aerial photographic Survey Discovery 2013	YES	1990s	pNHA	000774	B Rating: Nationally Important	
WX137	STOKESTOWN EAST - BARROW RIVER ESTUARY pNHA	270234	123988	Sub-site	Aerial photographic Survey Discovery 2013	YES	1990s	pNHA	000698	B Rating: Nationally Important	
WX138	STOKESTOWN SOUTH	270274	122498	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	17.79386984
WX139	CARNAGH POND AND WOODLAND	277464	122607	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	13.38508577
WX140	TINNACARRICK	279064	122619	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	28.27260164
WX141	RATHNAGEERAGH NORTH	278969	121844	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.43452205
WX142	RATHNAGEERAGH NASH	278547	120514	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	9.05879888
WX143	NASH	277462	121136	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.021422765
WX144	TELLAROUGHT	275970	120869	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	21.46907927

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WX145	BALLYMACLARE EAST	274488	121850	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	10.22805818
WX146	SLIEVECOILTIA COMMONS HEATH	272603	121049	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	38.75798431
WX147	OLDCOURT	271410	122039	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.384503397
WX149	TEMPLESHELIN WEST	282734	128299	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.587440283
WX150	TEMPLESHELIN EAST	284200	128495	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.664477318
WX151	DOONOONEY	289748	128977	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	17.99571333
WX152	TOMFARNEY UPPER	290185	129083	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.266877903
WX153	GALBALLY	292231	128059	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.104926998
WX154	KEREIGHT	295341	128982	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	28.19879401

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WX155	SHANAHONA TINNAKILLA	296522	129340	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	27.17953126
WX156	REDDINA BALLYHOGE	297696	127824	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	12.26315893
WX157	NEWTOWN UPPER	299353	126494	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	12.0506412
WX158	BALLINCLAY UPPER	292610	126808	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.099355486
WX159	RATHKYLE CUTOVER FEN	290243	126320	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	16.75024517
WX160	NEWTOWN FEN	288468	127884	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	17.2439091
WX161	TEMPLESHELIN SOUTH	284218	126894	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	7.172618728
WX162	MOORFIELDS	280506	125456	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	23.71247618
WX163	BALLYSHANNON	285191	125384	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	10.3936541

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WX164	CAMAROSS PINGOS	289174	124774	Main Site	Aerial photographic Survey Discovery 2013	YES	2018	SGI		F Rating: Unknown value - survey required	26.47847349
WX165	POLEHORE NORTH	298114	124865	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.82685763
WX166	POLEHORE SOUTH	298023	123850	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	22.64629322
WX167	MULLINREE	299267	122867	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	16.67922842
WX168	BREGORTEEN	295934	122732	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.69257575
WX169	HARRISTOWN LITTLE BALLYHENNIGAN OLDBOLEY	292409	122117	Main Site	Aerial photographic Survey Discovery 2013	YES	2018	SGI		F Rating: Unknown value - survey required	54.39799313
WX170	BALLYCLEMOCK	286150	123055	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.592542318
WX171	RATHSILLAGH ASSAGART	285766	123752	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.508523721
WX172	DUNGEER BALLYBEG MULMONTRY WET WOODLAND	290907	121773	Main Site	Aerial photographic Survey Discovery 2013	YES	2003	SGI		C Rating: Local conservation value (high value)	33.76929138

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WX173	GARRADREEN	295472	120174	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.653556278
WX174	COURTOWN GOLF COURSE PONDS	319755	157867	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.261918066
WX175	BALLINACUR	310538	156073	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	9.105191327
WX176	TOBERANIERIN UPPER	311531	153570	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland unlikely	NA	Undesignated site		F Rating: Unknown value - survey required	3.096138237
WX177	BALCARRIGHILL	311496	151047	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	18.31873524
WX178	COOLBAUN	300616	148771	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.277285358
WX179	FERNS LOWER CREATED WETLAND	302547	149361	Main Site	Aerial photographic Survey Discovery 2013	YES	2017	Undesignated site		D Rating: Local conservation value (moderate value)	1.375845092
WX180	CRONYHORN	305920	148529	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	12.31802842
WX181	BALLYREGAN	309102	148553	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.978582829

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WX182	BALLYTRACEY MONAGREANY LOWER	308448	146706	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	8.92274515
WX183	BALLYDONIGAN	304103	144873	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.470733124
WX184	RAHEENDARRIG	308761	144902	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	16.48305433
WX185	GARRYDUFF BALLINCASH LOWER	306246	143277	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	14.34944897
WX186	GARRYBRIT LOWER	306072	143714	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.883735589
WX187	SOLSBOROUGH WET WOODLAND	300289	142451	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	16.26150398
WX188	BALLYMOTY BEG & MORE	304287	140974	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.280314153
WX189	MONAWILLING LOWER	307219	140585	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.175310779
WX190	BOLABEG	290391	149929	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.354583659

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WX191	TOMADILLY	295580	145332	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.544303493
WX193	ASKUNSHIN	293807	142509	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.188829692
WX194	PULLINSTOWN LITTLE	293049	143805	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	19.12096145
WX195	MOYNE LOWER	297715	143416	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.225973437
WX196	FORGELANDS SOUTH LAKE	294532	140123	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		D Rating: Local conservation value (moderate value)	1.406093495
WX197	FORGELANDS NORTH WETLAND	295112	140904	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	40.04934792
WX198	KILLOUGHRUM WET WOODLAND pNHA	290337	141674	Main Site	NPWS Native Woodland Survey	YES	2003	pNHA	000765	B Rating: Nationally Important	
WX199	BALLYCRYSTAL RIPARIAN WOODLAND - BLACKSTAIRS MOUNTAINS SAC	286208	149150	Sub-site	NPWS Native Woodland Survey	YES	2003	pNHA, SAC	000770	A Rating: Internationally Important	

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WX200	BOLADURRAGH WET WOODLAND	287049	149460	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		D Rating: Local conservation value (moderate value)	7.151286744
WX201	KILTEALY NORTH WETLAND	283837	147537	Main Site	Aerial photographic Survey Discovery 2015	YES	NA	Undesignated site		F Rating: Unknown value - survey required	17.61417933
WX202	KILTEALY SOUTH WETLAND	285240	145566	Main Site	Aerial photographic Survey Discovery 2015	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.862477477
WX203	KNOCKATOBER	282792	142919	Main Site	Aerial photographic Survey Discovery 2015	YES	2019	Undesignated site		D Rating: Local conservation value (moderate value)	47.98174469
WX204	MANGAN	289171	143677	Main Site	Aerial photographic Survey Discovery 2015	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.160393261
WX205	KILLOUGHRUM	290217	143284	Main Site	Aerial photographic Survey Discovery 2015	YES	NA	Undesignated site		F Rating: Unknown value - survey required	10.71691516
WX206	MILLTOWN GLENGLASS	285260	140786	Main Site	Aerial photographic Survey Discovery 2015	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.061662044
WX207	BALLINESKER KETTLE HOLE LAKE	311595	129266	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.313490991

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WX208	KILMACOE KETTLE HOLE LAKES	310920	129155	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.156538418
WX209	BALLYVALLOO LOWER KETTLE HOLE LAKES	311986	130457	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.63525688
WX210	BALLYNACLASH KETTLE HOLE LAKES	312907	131436	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.073354206
WX212	BALLINROOAUN SOUTH KETTLE HOLE LAKES	309584	130771	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.105400821
WX213	BALLINROOAUN NORTH KETTLE HOLE LAKE EAST	308941	130752	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.105242735
WX214	BALLINROOAUN NORTH KETTLE HOLE LAKE WEST	308523	130663	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.598391671
WX215	NEWPORT KETTLE HOLE LAKES	309246	131804	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.160740973
WX216	BALLINRA KETTLE HOLE LAKES	309597	131772	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.259591822
WX217	BARNARIDDERY KETTLE HOLE LAKES	310524	131309	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.462503393

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WX218	BALLINA LOWER KETTLE HOLE LAKES	311918	131219	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.092134267
WX220	BALLINA KETTLE HOLE LAKES	310619	132394	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.519706547
WX221	GARRYVADDEN UPPER KETTLE HOLE LAKES	311129	132337	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.882009249
WX222	INCH UPPER KETTLE HOLE LAKES	312092	132091	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.183515655
WX223	GARRYVADDEN LOWER KETTLE HOLE LAKES	310520	132626	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.270601956
WX224	BALYROE (NUNN) KETTLE HOLE LAKES	309103	132479	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.028634278
WX225	BALLYROE (ANNESLEY) KETTLE HOLE LAKES	309657	132565	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.95596963
WX226	KNOCKBAUN	311267	133718	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.926909766
WX227	KNOCKNASILLOGE PONDS	314790	134730	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.196237064

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WX228	COURTCLOUGH LOWER POND	310426	137699	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.45291767
WX229	BALLINGOWAN NORTH WETLAND	311905	137718	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.727172215
WX230	BALLYTARSNA WETLAND	311495	138091	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.76770451
WX232	GARRAUN POND	313176	137581	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.0569698
WX233	GARRAUN WETLAND	312991	137346	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.049879998
WX234	BALLYVOODOCK WEST WETLAND	313629	136753	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.695901891
WX235	MONANARRIG	312764	136288	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.110641647
WX236	BALLYVOODOCK EAST WETLAND	314206	136822	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	12.26292018
WX237	BALLYVALDON POND NORTH	314981	136851	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.096234195

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX238	BALLYVALDON POND SOUTH	314896	136645	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.244751679
WX239	BALLINTUBBRID WETLAND	315124	137616	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.188376487
WX240	GARRAUN KILNEW KETTLE HOLES	314396	137425	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.058039636
WX241	BALLYNADRISHOGE POND	316066	136560	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.018463952
WX242	BALLYNAMONA SOUTH POND	316403	137075	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.375262698
WX243	BALLYNAMONA NORTH PONDS	316242	137686	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.402591074
WX244	KILLINCOOLY MORE KETTLE HOLES	316056	138564	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.509012043
WX245	KILLINCOOLY MORE WETLAND	316599	138429	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.554811571
WX246	BALLYADAM WETLAND	315263	139855	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.144509396

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WX247	BALLYDUFF PONDS	314550	139345	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.067436969
WX248	BALLYMACSIMON POND	315873	139031	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.194163135
WX249	BALLYNAHASK PONDS	315158	138558	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.046488369
WX250	BALLINGOWAN PONDS	312203	138080	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.278023607
WX251	TOMNAFUNSHOGE	301178	139658	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.224631941
WX252	COOLADINE KILPIERCE	301951	139291	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	13.07914086
WX253	GARRANTROWLAN NORTH	303287	139559	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.491210603
WX254	GARRANTROWLAN SOUTH	303255	138962	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.443494717
WX255	GARRYMILE	304172	139404	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.818839025

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WX256	COURTCLOGH POND NORTH	309714	137595	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.099048753
WX257	COURTCLOGH PONDS SOUTH	309290	137230	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.323128148
WX258	ASKABEG	309034	137039	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.236289068
WX259	SLIEVNAGRANE	307309	137505	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.784666296
WX260	TINRAHEEN	306360	136035	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.28387712
WX261	TINRAHEEN KILLISK WETLAND	305704	136513	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	130.5950843
WX262	CLONMORE UPPER BALLYBEG	303136	137153	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	3.714789056
WX263	CLONMORE UPPER BALLYNASTRAW	302229	136627	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.590536317
WX264	BALLYCOURCY MORE	300081	137094	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.227958852

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WX265	KILLISK POND NORTH	306123	134626	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.626620752
WX266	TINRAHEEN POND	306482	135654	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.34614612
WX267	KNOCKNAVEY	307818	135429	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.742672252
WX268	BALLYNAMONA WETLAND	308227	134724	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.065810925
WX269	BALLYROE (ANNESLEY) PONDS	308060	132783	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland unlikely	NA	Undesignated site		F Rating: Unknown value - survey required	0.275516712
WX270	BALLYROE (NUNN) PONDS	309282	132664	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.32127773
WX271	BALLINTAGGART POND	308005	132568	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.109124741
WX272	BALLYROE (NUNN) WETLAND	308856	132815	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.125788752
WX273	GARRYTINODAGH POND	306379	133080	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.964530664

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WX274	BALLYBEG GREAT PONDS	307257	133483	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.133893179
WX275	BALLYBEG GREAT PONDS NORTH	306862	133686	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.091477404
WX276	BALLYBEG GREAT WETLAND	307068	133078	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.913515396
WX277	KILLISK PONDS SOUTH	306541	133726	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.732852859
WX278	BALLINA UPPER BALLYLUCAS	305217	133664	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.576813282
WX279	BALLYLUCAS KETTLE HOLE LAKES	305016	132653	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.532753877
WX280	BALLINKEEL POND NORTH	303026	133878	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.275182912
WX281	BALLINKEEL POND SOUTH	302648	133558	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.566272432
WX282	BALLYMURN UPPER	301207	132629	Main Site	Aerial photographic Survey Discovery 2013	No Data - wetland unlikely	NA	Undesignated site		F Rating: Unknown value - survey required	34.85595866

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WX283	CLONNASHEEOGE KETTLE HOLE LAKES	304741	131003	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.333903357
WX284	GARRYHUBBOCK PONDS	305827	131190	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.292801764
WX285	KILLELAN KETTLE HOLE LAKES	305479	130909	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.748756318
WX286	GARRYVARREN	304678	130384	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.240817681
WX287	BARRYLOUGH LOWER BALLYHEIGE WETLAND	307329	131177	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.68713024
WX288	RATHTURTIN	281209	131212	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	10.63965505
WX289	RATHTURTIN SOUTH	282565	130374	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.37414797
WX290	RATHTURTIN EAST	284270	131212	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	11.87455322
WX291	TOMFARNEY	287217	131100	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	9.842552205

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WX292	KELLYSTOWN POND	289154	130826	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	12.29777948
WX293	KELLYSTOWN WETLAND WEST	289469	131346	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	34.71071747
WX294	CHAPEL WETLAND EAST	288468	131452	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.92514041
WX295	KELLYSTOWN WETLAND NORTH	290186	131769	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	16.95047822
WX296	CLONLEIGH NORTH	280365	132722	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	12.49915785
WX297	BALLINDONEY A	281278	135804	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.877343984
WX298	KILLEGNEY	284402	135042	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	14.09852066
WX299	FORRESTALSTOWN	285380	136327	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	35.26345638
WX300	BALLINDONEY B	281058	136273	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.620734999

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WX301	MONAMOLIN	280832	138739	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.943642451
WX302	TOMANINE	282233	138957	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	4.963878855
WX303	RATHFYLANE	288307	138672	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.263131846
WX304	KILTREA TEMPLESCOBY	292569	139754	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.110272031
WX305	TOMDUFF	296217	139135	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	15.71596311
WX306	BROWNSWOOD QUARRY LAKE SOUTH	298105	136333	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.331891822
WX307	BROWNSWOOD QUARRY LAKE NORTH	297916	137148	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	2.705444764
WX308	BALLYNAPIERCE	295699	137167	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	20.65371513
WX309	BALLYGILLSTOWN	292983	137412	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	6.176860085

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WX310	DAVIDSTOWN	293218	135734	Main Site	Aerial photographic Survey Discovery 2013	YES	NA	Undesignated site		F Rating: Unknown value - survey required	5.699757323
WX311	BALLYBRENNAN WET WOODLAND	306738	113221	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	9.185794302
WX312	KILDAVIN LOWER WET WOODLAND	300832	116534	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	8.065818989
WX313	LITTERBEG WET WOODLAND	316785	141272	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	6.673430374
WX314	ISLAND HOUSE WET WOODLAND	313257	140162	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	14.31071813
WX315	GARRYLOUGH LOWER WET WOODLAND	307148	129804	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		C Rating: Local conservation value (high value)	8.986388236
WX316	BALLYNABARNEY WOOD pNHA - SLANEY RIVER VALLEY SAC	299600	141178	Sub-site	NPWS Native Woodland Survey	YES	2003	SAC, pNHA	000746 000781	A Rating: Internationally Important	
WX317	GRAIGUEBEG BOG WOODLAND	296092	156592	Main Site	NPWS Native Woodland Survey	YES	2003	Undesignated site		E Rating: Local conservation value (low value)	2.788065784
WX318	KNOCKBRANDON UPPER POND	307696	162608	Main Site	Aerial photographic Survey Discovery 2016	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.642986998

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WX320	FERRYCARRIG HERITAGE PARK WETLANDS	301103	122806	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	PNR		D Rating: Local conservation value (moderate value)	9.906696712
WX321	CHURCHLANDS FARM POND	300793	112043	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.061959214
WX322	LOUGHGUNNEN GREAT FARM POND	300815	113330	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.087500016
WX323	FARDYSTOWN FARM POND	300061	113869	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.112525219
WX324	BARGY COMMONS POND	298178	116707	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.162444642
WX325	BALLYCONNICK QUARRY POND	294074	113557	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.815730613
WX326	BARMONEY QUARRY POND	290786	127025	Main Site	Aerial photographic Survey Discovery 2018	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	20.77766925
WX330	COROCK RIVER MARSH - BANNOW BAY SAC SPA	286035	114818	Sub-site	Dubsky Wexford Wetlands 2002	YES	2002	cNHA, RAM , SAC, WS		A Rating: Internationally Important	
WX331	HOLMESTOWN POND	297200	123481	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.259793044

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WX332	BALLYDICKIN UPPER POND	297973	127014	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.637443695
WX333	BARROW RIVER ESTUARY pNHA	269103	123759	Main Site	NPWS Service Conservation Worthy site list (on-line resource)	YES	2003	pNHA	000698	B Rating: Nationally Important	
WX334	BALLINDAGGAN POND	292277	292277	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.215657944
WX335	MONAMOLIN POND	308158	147665	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.530662907
WX336	TINCURRY BALLYCARNEY POND EAST	299406	147891	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.113393907
WX337	TINCURRY BALLYCARNEY POND WEST	297810	147839	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.12227207
WX338	BALLYLARKIN ATTENUATION POND	321163	167886	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.20102401
WX339	CROGHAN MIDDLE WETLAND	314441	170311	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	5.682065459
WX340	KILGORMAN POND	322597	164109	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.145487849

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WX341	KILDERMOT POND	321346	160806	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	2.113795245
WX342	GOREY EAST PONDS	317623	159935	Main Site	Aerial Photographic Survey 2022	YES		Undesignated site		F Rating: Unknown value - survey required	0.272533875
WX343	MARLFIELD HOUSE POND	316667	158942	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.30157132
WX344	DRUMDERRY AND CARLOW QUARRY PONDS	290301	158147	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.01483222
WX345	CLOBEMAN HALL POND	296048	151126	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.150447567
WX346	KILLENAGH POND	314850	147482	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.21178596
WX347	BALLINASTRAW UPPER POND	312510	147041	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.12730793
WX348	ENNISCORTHY BYPASS ATTENUATION POND	294254	141736	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.167831333
WX349	CORRAGEEN POND	280858	141616	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.517726097

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WX350	BALLYBAUN POND	280739	139792	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.404089036
WX351	CLOHASS ATTENUATION POND	293431	138808	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.07272126
WX352	BALLYLEIGH RESERVOIR POND	275294	133885	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.252853066
WX353	POULMARL POND	292178	120275	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.635238042
WX354	HORETOWN NORTH WETLAND	286824	121091	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	7.550737427
WX355	AUGHERMON QUARRY POND	290511	116002	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.294355421
WX356	GRANGE CARRICK PONDS	286140	109391	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.447754559
WX357	AMBROSETOWN QUARRY POND	290947	111109	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.261707725
WX358	CULLENSTOWN WEST WETLAND	286872	108082	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	8.81256495

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX359	TAGOAT IOAC POND	310627	111524	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		E Rating: Local conservation value (low value)	0.399916839
WX360	HOBBINSTOWN QUARRY PONDS	303907	112989	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	1.472784654
WX361	SOLSBOROUGH ATTENUATION POND	300794	142284	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.266593148
WX362	BALLYNAHALLIN ATTENUATION POND	298396	144469	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site, pNHA		F Rating: Unknown value - survey required	0.157039905
WX363	BALLYBRANNIS ATTENUATION POND	293572	140529	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.116433635
WX364	GLENTEIGE SOUTH ATTENUATION POND	299381	134388	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.065754618
WX365	GLENTEIGE NORTH ATTENUATION POND	299606	134965	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.176766344
WX366	DRUMGOLD LOWER ATTENUATION POND	299957	138591	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.088231089
WX367	BALLYNABARNY ATTENUATION POND	300980	140659	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.292171512

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX368	ENNISCORTHY EAST ATTENUATION POND	299654	141956	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.160931125
WX369	BALLYNAHALLIN SOUTH ATTENUATION POND	298979	143005	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.042288858
WX370	KNOCKAVOCKA ATTENUATION POND	304157	146756	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.358031176
WX371	BALLYCARRIGEEN LOWER ATTENUATION POND	305605	147903	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.074498666
WX372	QUARRY ATTENUATION POND	306775	148709	Main Site	Aerial Photographic Survey 2022	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	0.241230523
WX373	KNOCKROBIN LOWER ATTENUATION POND	308677	150991	Main Site	Aerial Photographic Survey 2022	No Data - wetland possible	NA	Undesignated site		F Rating: Unknown value - survey required	0.223344898
WX374	KILLABEG POND	299181	144589	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.205777152
WX375	CLONMORE COURT ATTENUATION POND	310352	153338	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.642372844
WX376	HAGGARD PONDS NORTH	276604	112378	Main Site	Aerial Photographic Survey 2022	YES	NA	Undesignated site		F Rating: Unknown value - survey required	0.414805452

WXWS Site Code	WXWS Site Name	Centre Easting	Centre Northing	Site Type	Site Source	Wetland Areas on the Site	Year of last survey	Designation	Designated Site Code	Indicative Site Wetland Conservation Ranking	Total site area ha from GIS
WX377	JOHNSTOWN EPA PONDS	302355	116970	Main Site	NBDC Dragonfly Project 2019-2024 Project	YES	2022	Undesignated site		E Rating: Local conservation value (low value)	

Appendix 6

County Wexford Wetland Study (WXWS)
2022 Project Deliverables

by Foss, P.J., Crowley, W., Vanmechelen, A. & Crushell, P.

Contents

1. County Wexford Wetland Survey 2022 by Foss, P.J., Crowley, W., Vanmechelen, A. & Crushell, P. (2022). Report for Wexford County Council. (In PDF format, requires Adobe Acrobat to view).

2. WXWS Wetland Site & Survey Filemaker Pro Databases Version 1.0 (requires FilemakerPro 12 or later to view).

3. Selected Excel tables to accompany the County Wexford Wetland Survey report including appendices.

1. Summary list of all wetlands in County Leitrim held in the WXWS Site Database.

2. Total data export on all site records and fields from the list of wetland sites held in the WXWS Site Database

4. GIS Shape files from the County Wexford Wetland Survey 2022.

a. ArcView GIS dataset with Heritage Council mapping convention (Requires ArcView 10 GIS Software)

b. MapInfo GIS dataset with Wexford County Council mapping convention (Requires MapInfo GIS Software)

5. Map books of sites in Counties Wexford (PDF format)

An Action of the County Wexford Biodiversity Action Plan 2013-2018