



County Louth Wetland Survey III

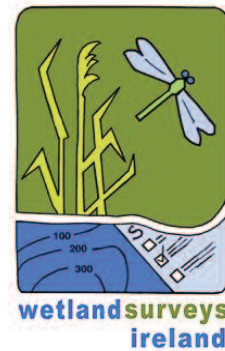
Part 1: Main Report

**Report prepared for Louth County
Council & The Heritage Council**

**An Action of the County Louth
Heritage Plan**

**by Peter Foss, Patrick Crushell,
Brendan Kirwan, Barry O'Loughlin &
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on behalf of Wetland Surveys Ireland



www.wetlandsurveysireland.com



An Chomhairle Oidhreachta
The Heritage Council



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An Action of the County Louth Heritage Plan

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Report cover images:

Top to Bottom: Louth Wetland Survey III sites: Nootka – Greenore Wetlands; Beaulieu North; Slievenaglogh & Barnattin Reservoir.

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County Louth Wetland Survey III 2014

The project involved a field survey of eighty freshwater wetlands in County Louth, with the aim of identifying the specific wetland habitats and ecological interest of each site. These sites had previously been identified as being of potential interest during the Louth Wetland Identification project prepared in 2011. This report presents the results of the 2014 field survey and includes detailed site descriptions and habitat maps for each of the wetland sites surveyed. The report also includes a final summary of the conservation value of all sites held within the Louth Wetland Survey GIS and database from the 2011, 2012 and 2014 Louth Wetland Surveys.

1 Acknowledgements

The County Louth Wetland Survey III (LWS III) was made possible through the financial support of Louth County Council and The Heritage Council. The project is an action of the County Louth Heritage Plan 2007-2011.

The authors wish to thank the following:

- Brendan McSherry, Heritage Officer, Louth County Council for help and advice during the compilation of background information on sites in County Louth and for commenting on the final report.
- Helen Divilly of Louth County Council for assistance in compiling the GIS.
- Landowners who allowed access to their land during the survey and also provided much useful information on the wetlands of County Louth.

We also acknowledge the assistance of the following groups and individuals who provided information on wetland sites in the county:

- Tom Curtis, Consultant Ecologist
- Maurice Eakin, NPWS

2 Executive Summary

- The aim of the Louth Wetland Survey III 2014 (LWS III) was to complete the field survey of wetland sites identified during the County Louth Wetland Survey II project (LWS 2012) for which ecological information was lacking or limited.
- During the 2011 Louth Wetland Identification Survey, 108 wetlands were surveyed and individual site reports were prepared (see Foss *et al.* 2011); while in 2012 a total of 90 wetlands were surveyed (see Foss *et al.* 2012).
- During the LWS III a total of 81 sites were selected for potential survey in 2014. These sites were selected based on:
 - the remaining sites that were newly identified during the LWS 2012 as potential wetlands for which no wetland information was available
 - previously reported sites for which there was limited information or which had not been surveyed in the recent past
- Access to two sites was not possible. Therefore, field surveys were undertaken on seventy nine sites. Detailed site descriptions, conservation evaluations, and habitat maps of these sites are presented in this report (see Appendix 5).
- On the surveyed sites, habitats were classified and mapped according to the *Guide to Habitats in Ireland* (Fossitt 2000). Threats and impacts were recorded, and habitats surrounding each wetland site were also noted.
- Information from the field survey, together with habitat maps and site photographs is stored within the County Louth Wetland Survey (LWS) database (version 3.0) (see Foss *et al.* 2011 for details of database structure and field attributes).
- Spatial information collected during the survey is stored in an updated version of the County Louth Wetland Survey (LWS) GIS dataset.
- The combined data from the County Louth Wetland Survey (LWS) site database and GIS was used to produce the site survey reports presented in Appendix 5.
- In all, twenty wetland sites identified during the survey are deemed to be of high local importance of greater. This included two heathland sites, one calcareous fen, and two transition mires. These habitats are listed under the EU Habitats Directive as habitats that are considered threatened across Europe.
- Of the 81 sites surveyed in 2014, three are ranked nationally important (B); six are ranked county conservation value (C+) and 11 sites are of local conservation importance (high value) (C) (see Appendix 1). The remaining sites are of lower ecological value.
- The Louth Wetland Survey (LWS) database now holds survey, habitat and conservation status information on 308 wetlands identified in county Louth, of which 278 sites were surveyed over 3 years as part of the Louth Wetland Survey projects 2011, 2012 and 2014.
- Based on the results of the LWS survey work undertaken over three years, and data held on other designated conservation worthy sites in the county, a revised conservation assessment of all 308 wetland sites in Louth is presented in this report (see Appendix 6).

3 Introduction and Background

In 2009 the National Parks and Wildlife Service (NPWS) provided Louth County Council (LCC) with a GIS dataset of 108 potential wetlands in the county (Brophy 2009). Following on from this, in 2011 LCC and The Heritage Council funded a survey of these 108 sites to determine their ecological characteristics and conservation value (see Foss *et al.* 2011).

The main output of the 2011 study was the *LWS site database* and associated *LWS Geographic Information System (GIS)* which each hold information relating to the 108 sites surveyed in 2011.

In 2012 Louth County Council and The Heritage Council funded the Louth Wetland Survey II project (LWS 2012) which identified additional wetland sites in Louth based on a range of information sources, including published reports and surveys, other GIS datasets, recommendations from ecologists, and from a systematic desktop GIS analysis of aerial photography considered together with sub soil data and historical OSI six inch mapping.

As part of the LWS II, field surveys were undertaken on a further 90 wetlands identified in the 2012 Louth Wetland Survey database and GIS (Foss *et al.* 2012) which held information on 307 sites in total.

The main aim of the County Louth Wetland Survey III 2014 (LWS III) project (Foss *et al.* 2014) was to complete the wetland field survey of the 81 un-surveyed sites identified in the LWS project and assess their ecological status with the view to improving our knowledge of the wetland resource of County Louth.

This aim was achieved by undertaking the following tasks:

- Eighty one sites that were selected following a review of the LWS 2012 dataset for survey in 2014.
- Seventy nine sites were visited during the 2014 survey and detailed descriptions of the wetland habitat present were recorded.
- Following the completion of field surveys, the ecological value of each site was assessed and sites were then ranked according to ecological importance.
- All data recorded during the survey was stored in the LWS survey database.
- The County Louth Wetland Survey (LWS) GIS dataset and Site database were updated to include the results of the 2014 survey.

The outputs of the LWS III will assist Louth County Council in its obligations to protect the most important wetlands within the county and should inform future conservation policies in relation to wetlands.

3.1 Project summary

The LWS III project was undertaken over a four month period from the start of July 2014.

The following is a summary of the main elements which formed the basis of the project, details of which are provided in the Section 4 below.

- Eighty one were selected from the County Louth Wetland Survey (LWS) GIS dataset for survey in 2014.
- Sites were selected on the basis of the potential occurrence of EU Habitats Directive habitats.
- Additionally, sites previously identified as potentially containing wetlands, and for which no habitat data existed were selected.

-
- Following the site selection process, survey maps of all sites were prepared.
 - As part of the 2011, 2012 and 2014 LWS, a digital recording form using the Filemaker Go and iGIS software applications operating on the Apple iPad (see Foss *et al.* 2012). This form was integrated into the LWS survey database to allow direct entry of digital site information (species recorded, habitat information, threats and impacts noted on site etc.) during the field survey. This method of data capture improves survey efficiency and accuracy, as data does not need to be transferred from paper survey cards following completion of the field visits.
 - A paper based wetland survey recording card was also designed as a fall back in case digital recording was not possible for technical reasons (see Appendix 3). The paper based field card recorded identical information to that held in the iPad digital survey form.
 - The Louth Wetland Survey Database (LWS), holds survey information on sites examined in detail. This survey database was linked to the original County Louth Wetland Site (LWS) database where core information on wetland sites is held via a unique site code and survey code numbering system. Once survey information was inputted to the LWS survey database, a complete site report could be produced from data held within the two related databases (see Appendix 5).
 - The field survey was undertaken during August 2014. A total of seventy nine sites were surveyed. Following the field survey, habitat maps and site descriptions were prepared for each site. The ecological value of each site was then assessed using an objective site evaluation scheme and all sites ranked in terms of their local, national or international conservation value.
 - Information gathered during the field survey was used to populate the Louth Wetland Survey Database (LWS), prepare habitat maps, create a photographic record of the site, and update the County Louth Wetlands Survey (LWS) GIS dataset and Site database.
 - Individual site reports (which include site description, habitat map, photographs and conservation recommendations) were prepared for each site surveyed. These site reports are presented in Appendix 5 of this report.
 - A CD containing digital copies of the updated County Louth Wetland Survey (LWS) GIS dataset and County Louth Site (LWS) database accompanies this report.
 - In addition this final report of the Louth Wetland Survey (LWS) presents a summary ranking on all the 308 wetland sites identified in Louth during the past 3 years (Foss *et al.* 2011; 2012 & 2014).

4 Materials & Methods

4.1 County Louth Wetland Survey 2014 - Site Selection

At project commencement a total of eighty one sites were selected from the Louth Wetland Survey (LWS) GIS dataset for survey. The final list of sites proposed for survey is presented in Appendix 1.

The selection of sites to be surveyed included:

- the remaining sites newly identified in the LWS 2012 as potential wetlands for which no wetland information was available
- previously reported sites for which there was limited information or which had not been surveyed in the recent past but proposed as conservation worthy areas
- sites being representative of the variation of important EU wetland habitat types in the county.

4.2 County Louth Wetland Survey 2014 - Field Survey

4.2.1 Data Management

4.2.1.1 Field Survey Data

The LWS III used a digital field survey recording system (utilising 'Filemaker Go' software operating on the Apple iPad) to record site survey data (see 4.5 below) directly (see Foss *et al.* 2011 & 2012 for details).

4.2.1.2 Survey Photographs

All survey photographs were geotagged using the 'Geotag Photos Pro' software package thereby allowing the latitude and longitude of where photos were taken to be attached to the photo and displayed within GIS applications.

4.2.1.3 Habitat Mapping and Target Notes

Digital mapping was undertaken in the field using the iGIS software package (Version 5.1.3) running on the Apple iPad. The software displays shapefiles, using satellite imagery from Google Maps as the basemap and allows editing of point, polygon, and linear shapefiles in the field.

Prior to the commencement of surveys, a series of shapefiles (designated site boundaries, LWS site boundary file, and a LWS target note file) were pre-loaded into the iGIS Application. During each site visit, notes were recorded as points in the LWS target note shapefile. Habitat information, features of interest, damage, and boundary issues were all recorded as target notes. Following completion of the survey the shapefiles were used to produce site habitat maps and populate relevant fields in the LWS survey database.

4.2.2 Field Survey Methodology

Field surveys were undertaken during the period August 2014. During each site visit the following was undertaken:

- The general ecological characteristics of the site were noted
- Site photographs of notable features were taken
- Target notes of features of interest within the site were recorded using iGIS software operating on the iPad
- Habitats within and immediately adjoining the site were identified according to Fossitt (2000)

- Notes were taken on the correspondence of any habitats to those listed under Annex I of the EU Habitats Directive
- An assessment of threats/damaging activities occurring at the site including their severity and location on site
- Species of both flora and fauna were recorded
- Landowner comments were recorded
- Site descriptions were prepared

Plant identification followed Webb *et al.* (1996), and species nomenclature follows Scannell & Synnott (1987). The presence of rare or protected species was also noted.

Mammals observed were recorded using nomenclature in Sterry (2004) and birds were identified using Ferguson-Lee *et al.* (1983). Any reptiles, amphibians or (readily identifiable) invertebrates were also noted.

Following the survey, sites were given an evaluation rating using guidance developed by the NRA (2009) as outlined in Appendix 4.

4.2.3 Survey Constraints

The presence of bulls, security fencing, high barbed wire fencing, high water levels, and wide deep drainage ditches hindered field work by preventing safe access to parts of some of the sites. Such areas were assessed using binoculars. Areas that were inaccessible were marked in the GIS using target notes.

The main purpose of the project is to create an inventory of wetlands within the county. In order to assess as many sites as possible within the time and budgetary constraints of the project, surveys were normally confined to only those parts of the sites that appeared, from the aerial photography, to be of most interest. The level of information gathered at each site was sufficient to evaluate its ecological importance and wetland interest.

4.2.4 Habitat Classification

The habitats within each wetland visited and those immediately adjacent to the site were classified in accordance with *A Guide to Habitats in Ireland* (Fossitt 2000).

Guidance in determining whether or not a habitat type present within a wetland may correspond to a habitat listed on Annex I of the EU Habitats Directive was sought from a variety of sources including:

- Interpretation Manual of European Habitats (Ramao 1996)
- Guidelines for a National Fen Survey of Ireland – Survey Manual (Foss & Crushell 2008)
- NPWS Study of the extent and conservation status of springs, fens and flushes in Ireland in 2007 (Foss 2007)
- The Status of EU Protected Habitats and Species in Ireland (NPWS 2008 & 2013)
- A Guide to Habitats in Ireland (Fossitt 2000)

4.2.5 Consultation with Landowners

Where possible, landowners were identified by calling to the nearest dwelling, and permission was sought for access to the site. Discussions with landowners typically included an explanation of the project often followed by an informal conversation about the particular wetland site and its past and recent management. If landowners could not be identified, land was surveyed from the nearest publicly accessible point. A letter

outlining the purpose of the survey prepared by the Heritage Office of Louth County Council was carried and shown to all landowners and displayed in survey vehicles.

All landowners that were approached during the survey permitted access to their lands.

4.2.6 Site Conservation Assessment & Evaluation

Each wetland surveyed in the field was assigned an evaluation rating by the project ecologist(s) who had visited the site. This evaluation was based on the NRA (2009) evaluation scheme as outlined in Appendix 4.

4.3 County Louth Wetland Survey Database – Structure and Content

As part of the County Louth Wetland Survey 2012 a Wetland Survey (LWS) database (version 2.0) was created to hold survey data on sites from that survey. This database was connected to the County Louth Wetland Site (LWS) database (which holds general and descriptive site data recorded in various third party reports and datasets) via the unique site code (number) assigned to each site. These databases were created using Filemaker Pro 11.0 software package which allows data export to Excel spreadsheets.

The final version of the LWS database suite (with the site survey data from the LWS 2012 added) was provided to Louth County Council at the end of the 2012 survey and was given the name County Louth Wetland Survey (LWS) database Version 2.

The information collected from the 2014 field survey was subsequently used to update the County Louth Wetland Survey database (Version 3.0) which is included on the final project CD accompanying this report.

For further information on the LWS database structure and fields see the Louth Wetland Survey report from 2012 (Foss *et al.* 2011 & 2012).

A paper based field recording card was also created for the 2014 survey (see Appendix 3). This contained the same recording fields as the iPad survey form. It was created in case of failure of the digital recording system.

4.4 County Louth Wetland Survey (LWS) – GIS Dataset

The County Louth Wetland Survey (LWS) GIS dataset created by Foss *et al.* 2011 (using ArcView 10 GIS software package on a Windows Operating System) and updated in 2012 was used throughout the LWS III for all site selection and mapping purposes.

See Foss *et al.* (2012) for further details on the structure and format of this LWS GIS dataset.

All habitat maps produced during the LWS III project were added to the GIS dataset. In certain cases site boundaries were adjusted based on field observations. The updated and revised version of the LWS GIS dataset was delivered at the end of the project to Louth County Council, dated October 2014 and are included on the final project CD accompanying this report.

4.5 Indicative Conservation Ranking of All Wetlands in Louth

As part of the final LWS III project, all 308 sites within the LWS database were reviewed and their conservation value re-examined. This re-evaluation was undertaken to take account of the additional information on the wetland resource of the county that has become available following the completion of the study. All sites were evaluated according to the NRA (2009) scheme as reproduced in Appendix 4.

Initially, the evaluation assigned to those sites that were surveyed as part of the LWS (2011, 2012 & 2014) was reviewed (278 sites in all). The remaining 30 sites held within the LWS database, which had been surveyed previously by third parties, had their conservation ranking re-considered based on the information available on each site.

During the course of this review, the evaluation of some sites surveyed as part of the LWS was adjusted. Where this was the case, an explanation for the alteration is presented (see Appendix 6).

5 Results

5.1 County Louth Wetland Survey 2014

5.1.1 Sites Subject to Field Survey 2014

Of the sites selected for survey, two sites were not subject to field survey because of access difficulties. Those 79 sites that were listed for survey are presented in Table 1 below and their location illustrated in Figure 1. Further summary details of each site and their location are presented in Appendix 1 & 2.

Detailed site reports are presented in Appendix 5. Within these reports, the ecological characteristics of each site are described in detail, habitat maps (where wetland areas were recorded) are presented, and a conservation evaluation made.

Table1: List of sites proposed for survey during the Louth Wetland Survey III.

Site Code	Site name	Centre Easting	Centre Northing	Site designations
161	BARMEATH WOODS cNHA	309487	287640	pNHA, cNHA
165	BALLYMAKELLETT LANDS cNHA	311451	312099	cNHA
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	307198	276004	cNHA
182	BARNATTIN RESERVOIR	305098	279091	Undesignated site
190	AGHAMEEN	313267	311184	Undesignated site
191	AGHNASKEAGH	307233	312145	Undesignated site
192	ALLARDSTOWN	300143	300663	Undesignated site
193	ALLARDSTOWN AND KILLINCOOLE	299540	300331	Undesignated site
194	ARTNALEVERY	293211	293353	Undesignated site
195	BALLYNAHATTIN AND REDCOW	304841	310688	Undesignated site
196	BALLYONAN	315886	314668	Undesignated site
197	CARDISTOWN	291359	295172	Undesignated site
198	CARRICKANEENA	306057	313858	Undesignated site
199	CASTLETOWNCOOLEY HEATH	317284	307776	Undesignated site
200	CLONALEENAGHAN	296420	310040	Undesignated site
201	CLUIDE	306282	288825	Undesignated site
202	CRUMLIN	304112	304420	Undesignated site
203	DRUMGONNELLY	295109	305108	Undesignated site
204	DRUMGOWNA AND MUFF	293257	301022	Undesignated site
205	DUNGOOLY	300940	313357	Undesignated site
206	FEEDE	307107	313849	Undesignated site
207	GALLSTOWN	307820	284194	Undesignated site
208	GLENMORE	314813	311336	Undesignated site
209	GRANGE	297953	303311	Undesignated site
210	GRANGE IRISH	318761	308821	Undesignated site
211	HAYNESTOWN	305405	301563	Undesignated site
212	JENKINSTOWN	312309	310519	Undesignated site
213	JENKINSTOWN AND BELLURGAN	310854	309942	Undesignated site
214	KILCRONEY AND CORDERRY	298688	298663	Undesignated site
215	LACKNAGREAGH	296467	307961	Undesignated site
216	LANNAT EAST	289575	302020	Undesignated site
217	LIBERTIES OF CARLINGFORD AND COMMONS	319145	309601	Undesignated site

Site Code	Site name	Centre Easting	Centre Northing	Site designations
218	LIBERTIES OF CARLINGFORD WEST	318808	309911	Undesignated site
219	LOUTH HALL	294125	296351	Undesignated site
220	MARSH NORTH WET GRASSLAND	306890	308536	Undesignated site
221	MOUNTBAGNALL	315869	306233	Undesignated site
222	PART OF HARRISTOWN	293946	293379	Undesignated site
223	PLASTER	307152	312481	Undesignated site
224	RAMPARK	314260	307611	Undesignated site
225	RATHMORE ¹	299899	308293	Undesignated site
226	RATHNEETY	298642	301837	Undesignated site
227	REDCOW	305953	309913	Undesignated site
228	ROOTATE NORTH	291654	302436	Undesignated site
229	ROSSLOUGH	292649	303204	Undesignated site
230	SLIEVENAGLOGH	314301	308674	Undesignated site
231	THOMASTOWN	292415	298355	Undesignated site
232	TULLY	288096	295761	Undesignated site
234	AGHAGLASS	294387	304267	Undesignated site
241	BALLINFUIL	299941	312459	Undesignated site
243	BALLYNAGRENA	307860	287855	Undesignated site
244	BALLYNAHATTIN	305085	309854	Undesignated site
245	BALRIGGAN	303298	310037	Undesignated site
246	BALTRAY	314680	277423	Undesignated site
248	BAVAN	312888	315889	Undesignated site
250	BEAULIEU NORTH	312717	277431	Undesignated site
254	CARRICKALLAN AND MULLABOHY	299298	305651	Undesignated site
265	COLLON WEST	299092	283205	Undesignated site
266	CORBOLLIS	298576	297500	Undesignated site
268	CROSSABEAGH	297885	305324	Undesignated site
269	CROWMARTIN	288240	295231	Undesignated site
270	CUNNICAR	296773	309033	Undesignated site
273	DROMISKIN NORTH	305421	297979	Undesignated site
279	EMLAGH	295974	302161	Undesignated site
282	FEEDE AND DRUMAD	307237	314821	Undesignated site
288	JENKINSTOWN AND MULLAGHATTIN	312797	310663	Undesignated site
290	KILLEEN	293469	300381	Undesignated site
291	KILLIN	315101	308846	Undesignated site
293	KILLINEER ¹	305143	279492	Undesignated site
298	LISDOO	304493	309498	Undesignated site
300	LOUTH HALL AND RATHEESTIN	294431	297524	Undesignated site
304	MODEL FARM	304824	297614	Undesignated site
305	MONEYCROCKROE	314059	311923	Undesignated site
306	MOUNTRUSH	292006	294384	Undesignated site
314	ROXBOROUGH	306878	283286	Undesignated site
315	ROXBOROUGH AND BANKERSTOWN	305944	283285	Undesignated site
322	THOMASTOWN AND RATHNEESTIN	293138	298426	Undesignated site
327	ROXBOROUGH QUARRY	310884	293191	Undesignated site
328	NOOTKA - GREENORE WETLANDS	320365	310350	cNHA
329	MULLABANE	322000	308100	Undesignated site
330	ROSEHALL RESERVOIR	307030	277375	Undesignated site

Site Code	Site name	Centre Easting	Centre Northing	Site designations
332	DARVER CASTLE WETLAND	301101	298444	Undesignated site

¹Site was not surveyed in the field as access was not possible.

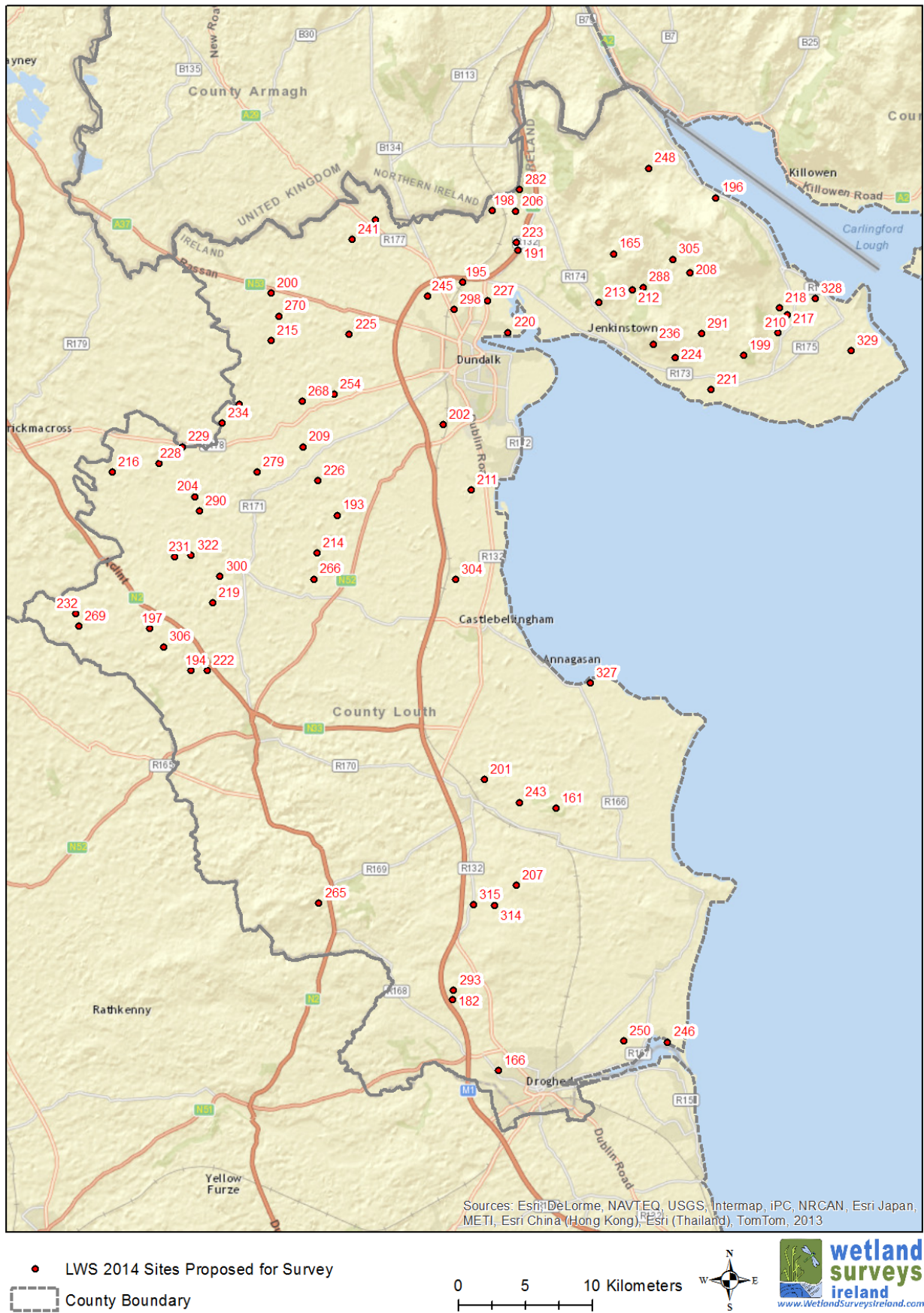


Figure 1: Location of sites selected for survey as part of the County Louth Wetland Survey 2014. Two sites (LWS 225 & 293) were not surveyed due to access difficulties. (Detailed location maps are presented in Appendix 2).

5.1.2 Wetland types recorded during LWS Field Survey 2014

Seventy nine sites were surveyed in detail as part of the LWS III. The habitats present (both wetland and non-wetland) within and surrounding each wetland site were recorded using Fossitt (2000) based on field survey observations. Summary descriptions of these wetland types, with examples of where they can be seen in County Louth is provided in Foss *et al.* (2012), while more detailed habitat descriptions with characteristic species is given in Fossitt (2000). Summary findings of the LWS III in relation to those habitats targeted are presented in the following sections.

Wetland habitats recorded during the survey included a wide range of habitats of varying ecological importance.

The most notable habitats that were encountered included; rich fen, transition mire, wet and dry heath and wet woodland. Calcareous springs were recorded within one site (LIBERTIES OF CARLINGFORD WEST).

Good examples of transition mire habitat were recorded at three sites (CROSSABEAGH; JENKINSTOWN AND MULLAGHATTIN; ROXBOROUGH AND BANKERSTOWN).

Wetlands of lower ecological interest that were recorded during the survey included lakes and ponds that occur within active and disused quarries, and small fragmented wetlands within intensively managed agricultural lands. A summary description of each site surveyed is presented in Table 2 below. Further summary details are presented in Appendix 1, while more detailed site reports are presented in Appendix 5.

Table 2: Summary description of sites surveyed during the Louth Wetland Survey III.

Site Code	Site name	Report Site Description
161	BARMEATH WOODS cNHA	Site comprises man made eutrophic pond, initially constructed ca 200 years ago by historical landowner. Site is managed as part of estate grounds. Pond nutrient enriched and with a complete cover of Lemna minor in 2014.
165	BALLYMAKELLETT LANDS cNHA	This site contains an excellent example of dry siliceous heath with a mosaic of bracken, dry acid grassland and a small area of wet heath. The site should be included within the boundary of the surrounding SAC.
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	Site comprises a large artificial quarry pond and associated cliff face. Rock extraction operations have been abandoned for some time.
182	BARNATTIN RESERVOIR	Very limited marginal wetland vegetation mostly dominated by narrow Phalaris fringe around the edge of the lake.
190	AGHAMEEN	This is a small slope dominated by dense bracken and gorse scrub, there is a very small area of wet grassland but this is no more than 5-10 metres square in extent.
191	AGHNASKEAGH	Former wetland that has been developed within the M1 motorway corridor. No wetland interest. Site has been entirely re contoured and no comprises built land and dry grassy verges.
192	ALLARDSTOWN	Former wetland that has been drained and infilled. The little wetland vegetation remaining is confined to a drainage ditch that passes through the site.
193	ALLARDSTOWN AND KILLINCOOLE	Main part of the site is under willow woodland. Access was not possible due to the presence of large ditch. Aquatic vegetation in ditch (artificial pond) along western part of site.
194	ARTNALEVERY	Area of degraded marsh, now mostly rank grassland. Some rubble in-filling present. Surrounded by improved grassland which is enriching site. Drainage ditch in centre with some surface water and Lemna minor present.
195	BALLYNAHATTIN AND REDCOW	This site contains no significant wetland habitat, a deep hollow was excavated to build the railway embankment and this floods seasonally, it has become colonised with alder and willow, scrub on railway embankment at rear of houses. Spring within site damaged

Site Code	Site name	Report Site Description
		by cattle.
196	BALLYONAN	No wetland present, site now afforested or on lower slopes returning to scrub. It is likely that these slopes were wet heath with localised rich flushes in the past as evidenced by vegetation in small seeps along forestry track.
197	CARDISTOWN	No wetland interest on site.
198	CARRICKANEENA	Mix of dry scrub (mostly Ulex) with dense bracken and dry meadow dominated by rank grasses. No wetland interest. Northern part of site recently reclaimed.
199	CASTLETOWNCOOLEY HEATH	This site is dominated by dense bracken and gorse and contains no wetland habitats of value.
200	CLONALEENAGHAN	This wetland is now reduced to a small area of quaking reed swamp surrounded by willow scrub.
201	CLUIDE	No access possible during the 2014 survey. Quarry is currently inactive.
202	CRUMLIN	Depression between low hills, with narrow reed bed and wet willow woodland. Southern end grazed by cattle. Marginal areas grazed by cattle. Drain runs through centre.
203	DRUMGONNELLY	Species rich marsh bisected by occasional drains with standing water and scattered willow. The eastern section has been recently grazed by cattle, while the western section remains ungrazed.
204	DRUMGOWNA AND MUFF	Small dried out marsh area in landscape hollow. Receiving nutrient enrichment from adjacent cereal crop. Large lateral ditch. Dominated by <i>Epilobium hirsutum</i> and <i>Agrostis stolonifera</i> . Alder scrub is encroaching on the marsh.
205	DUNGOOLY	<i>Juncus effusus</i> dominated semi improved grassland. Mature willow scattered throughout. Wetland interest confined to river along southern boundary.
206	FEEDE	Wet grassland grades into a small wet alder woodland. The trees appear even aged and semi-mature. Within the woodland the understory is dominated by grasses and low herbs with frequent bramble.
207	GALLSTOWN	The site does not contain any wetland habitats. The site manager for the quarry (Kilsaran Concrete Ltd.) revealed that there was no surface water or ponds present within the site at this time.
208	GLENMORE	Sloped fields into valley dominated by gorse scrub with open wet grassland areas with <i>Juncus</i> . Grazed by livestock. Only wetland interest on site is stream in valley bottom.
209	GRANGE	Small area of transition mire with two open bog bean pool surrounded by <i>Iris</i> and <i>Epilobium hirsutum</i> marsh. Drainage ditch drains area. Willow scrub woodland towards north. Degraded and nutrient enriched.
210	GRANGE IRISH	No obvious wetland habitat present, scrub on slope with improved grassland above and below, enquired locally, no suggestion of any springs present on slopes.
211	HAYNESTOWN	Conifer forestry plantation. No wetland value on site.
212	JENKINSTOWN	Area of gorse scrub and dry meadow vegetation. Site is unmanaged and is likely to have been a wetland in the recent past. Small watercourse that has been modified and channelised runs through the site.
213	JENKINSTOWN AND BELLURGAN	Large upland site that is dominated by a mix of dense bracken and gorse scrub. Some rock outcrops with associated heath vegetation. No evidence of any significant wetland interest in the site.
214	KILCRONEY AND CORDERRY	Site contains no wetland interest. Some aquatic and emergent plants occur along deep drainage ditch that bisects the site. Improved grassland and arable to south and dry grassy verge vegetation to north.
215	LACKNAGREAGH	There is little in the way of wetland habitat remaining, the upper slopes were planted with a mixture of native and non native tree

Site Code	Site name	Report Site Description
		species surrounding a private house and the lower slopes are drying out and becoming invaded by scrub.
216	LANNAT EAST	Field which is being used for cattle grazing. Wet central area with marshy vegetation with Typha and Filipendula. Scattered willow scrub. Former marsh area.
217	LIBERTIES OF CARLINGFORD AND COMMONS	No wetland present, hillside covered in scrub and bracken.
218	LIBERTIES OF CARLINGFORD WEST	This is a small calcareous spring with rich alkaline fen developed long margins. There is a small area of Schoenus fen with tufa deposits, the lower part of the field is wet grassland which grades into GS2 and dense bracken on higher ground.
219	LOUTH HALL	Small lake that is fenced off from surrounding grassland. Narrow margin with Sparganium erectum and Polygonum sp. Some willow saplings occur around lake margin.
220	MARSH NORTH WET GRASSLAND	Wet grassland which has been improved through drainage, fertilisation and reseeded. Bounded by deep drainage ditches and hedgerows.
221	MOUNTBAGNALL	Active quarry site with some silt ponds. Most surrounded by bare recolonising ground. No aquatic vegetation. Part of site examined in detail, remainder had no access due to active quarrying.
222	PART OF HARRISTOWN	Surrounding arable land likely to be causing enrichment via runoff. Dominated by Salix alba growing to 20 m. Little wetland interest.
223	PLASTER	Wetland interest of the site is confined to the river which is fast flowing comprising a series of riffles separated by small pools and glides. Small patches of alder, ash, willow woodland occurs to northern end of site.
224	RAMPARK	Area of dry grassy vegetation in patches between gorse scrub and dense bracken. Used to graze sheep. No wetland present. Most of site covered by dense gorse scrub.
225	RATHMORE	Unable to access this site, looks to be wooded.
226	RATHNEETY	Site is improved grassland with draunage ditch. Small hollow occurs in field. Bare soil exposed. No wetland occurs on site outside of some Typha growing out of drain.
227	REDCOW	Small area of dense mixed plantation with willow, ash, and pine. Drainage ditch along roadside with common reed. No wetland interest.
228	ROOTATE NORTH	Small area of willow scrub in landscape depression. Ground layer rough grassland. Drainage ditches occur with adjacent fields. Dried out former marsh area.
229	ROSSLOUGH	Large area of wet grassland and degraded marsh in landscape depression. Numerous drainage ditches in area. Used to graze cattle. No wetland interest.
230	SLIEVENAGLOGH	Rocky upland area with exposed rock and scree, dense bracken and gorse scrub. Area of wet and dry heath occur. Small upland lake with marginal poor fen margin occurs in hanging valley below Slievenaglogh summit.
231	THOMASTOWN	No wetland interest. Small depression in improved pasture that may flood occasionally during winter. Field reseeded in the past. No wetland indicators present to suggest prolonged inundation.
232	TULLY	Main part of site composed of degraded marsh, with wet grassland and scrub occurring together. Extensive extensive network throughout area.
234	AGHAGLASS	This is a linear reed bed at the foot of a valley surrounded by willow scrub. There has been recent infilling of the site in one area.
241	BALLINFUIL	Northern part of site comprised wet grassland and marsh, with large drainage ditch along northern margin. Species poor wet grassland occurs to southern end of site.
243	BALLYNAGRENA	Drained marsh area with wet grassland and willow scrub. Area is

Site Code	Site name	Report Site Description
		grazed by cattle and contains numerous drains.
244	BALLYNAHATTIN	No significant wetland habitat remains on this site which has been mostly infilled under a waste permit licence granted to McParland Bros Ireland Ltd. for disposal of soil and stones.
245	BALRIGGAN	This is a small hollow which is spring fed in the winter but is now infilled with nettle and canary reed grass. Some mature willow and poplar trees are also present.
246	BALTRAY	No access to the site was possible during the 2014 survey. The site is fenced off from the surrounding road. Grassy verge vegetation surrounds the reservoir on an elevated earth bank.
248	BAVAN	Small pockets of poor fen with occasional rich flushes occur. Recent clearance works have occurred. Other fields contain wet grassland, acid grassland and scrub.
250	BEAULIEU NORTH	Site comprises a man made wetland that consists of cut out depressions and back filled soil that has successfully established as a functioning wetland system. Reed swamp and marsh dominate the site.
254	CARRICKALLAN AND MULLABOHY	Small area of what may have been alkaline fen. Site is now damaged through drainage and reverting to wet grassland. A large drainage ditch bisects the site with elements of wet woodland. A small area of transition mire is found at the eastern end.
265	COLLON WEST	The site is dominated by <i>Juncus effusus</i> wet grassland. Surrounded by narrow band of gorse scrub and hedgerows. Probably improved in the past.
266	CORBOLLIS	Large stagnant drainage ditch surrounds the site. Aquatic and wetland plants occur within and along this feature. Main part of the site comprises dry mature birch woodland with willow and hawthorn.
268	CROSSABEAGH	Small quaking transition mire fringed with willows and alder. Small pond with open water at eastern side, may be natural dystrophic pond. Good natural gradation between the various habitats.
269	CROWMARTIN	Vegetation dominated by <i>Sparganium erectum</i> and <i>Carex acutiformis</i> . Frequent tall herbs with scattered willow. Likely to be nutrient enriched.
270	CUNNICAR	Area of dried out transition mire either side of track with scattered osier willow at southern margin and some scrub. Some drainage activity within southern portion.
273	DROMISKIN NORTH	Area of mature spruce afforestation. No wetland interest.
279	EMLAGH	Drained and degraded area of tall sedge swamp, with willow scrub areas along drainage ditches. Surrounded by tilled land which is providing nutrient input. Deep drains runs through site.
282	FEEDE AND DRUMAD	Steep, sloping site mostly dominated by mix of <i>Ulex</i> scrub and dense bracken. Parts of the site are planted with Sitka spruce. Elsewhere exposed siliceous rock and associated heath occur.
288	JENKINSTOWN AND MULLAGHATTIN	The upper fields are dominated by a mix of transition mire and willow scrub. Further down slope drainage has had an effect and the grassland becomes progressively drier in character.
290	KILLEEN	Small wetland hollow between tilled fields. Contains wet willow woodland with marshy understory. Marginal infilling with rubble and brash cuttings has occurred.
291	KILLIN	Area of wet and dry heath which is extensively disturbed and broken into fields, with areas of dense gorse scrub. River occurs in valley bottom. No other wetland interest on site. South western part of site walked, remainder examined from a distance.
293	KILLINEER	No site access possible during the 2014 survey. It appear that an artificial pond occurs within a disturbed area with bare ground and recolonising bare ground. Possibly managed for quarry extraction.
298	LISDOO	Small depression in the landscape with degraded reed swamp vegetation surrounded by improved agricultural grassland. Cattle have access to this area.

Site Code	Site name	Report Site Description
300	LOUTH HALL AND RATHEESTIN	Variable site with a mosaic of wet and dry habitats. Southern part of the site comprises dry grassy verge vegetation which grades into <i>Agrostis stolonifera</i> dominated wet grassland and <i>Carex disticha</i> marsh further north. Narrow band of Alder woodland along northern boundary.
304	MODEL FARM	Degraded marsh present throughout. Abundance of <i>Iris</i> and <i>Epilobium hirsutum</i> . A mature <i>Salix</i> and <i>Populus</i> treeline forms the south eastern boundary. Site is heavily impacted by drainage and reclamation.
305	MONEYCROCKROE	Large field with wet grassland used as rough grazing, and adjacent <i>Molinia</i> wet grassland area. Gorse scrub invading. Only wetland interest within site is stream in base of valley.
306	MOUNTRUSH	Intensively managed immature woodland. Low species diversity. Only wetland interest is likely to be confined to water course.
314	ROXBOROUGH	Site comprises an extensive area of marsh habitat in a low lying depression dominated by <i>Iris pseudocorus</i> and <i>Phalaris arundinacea</i> . Substrate conditions are soft.
315	ROXBOROUGH AND BANKERSTOWN	Site comprises an area of transition mire with quaking substrate conditions, located in a natural depression. Surrounding habitats include scrub and improved pasture. A stream from the south flows into this wetland system.
322	THOMASTOWN AND RATHNEESTIN	Broadleaved plantation woodland that comprises a large number of non-native trees, herbs and shrubs. Frequent artificial ponds shaded with abrupt edges supporting some wetland plants. Elsewhere the site is dry underfoot and used as an amenity.
327	ROXBOROUGH QUARRY	A small open water pool and associated wetland community with <i>Typha</i> occurs in the base of an abandoned quarry. Sheer rock walls occur on the southern side while the northern area is open and grades into agricultural grassland.
328	NOOTKA - GREENORE WETLANDS	This is a large block of wet woodland dominated by alder with frequent ash, willow, and occasional oak, hawthorn and holly. The ground is soft underfoot with frequent liverwort cover.
329	MULLABANE	This is a small reed swamp area in a shallow depression surrounded by improved grassland. There is a natural gradient to the wetland from the surrounding fields.
330	ROSEHALL RESERVOIR	The site is a water reservoir for the town of Drogheda and has limited wetland value. It is surrounded by mature treelines with little marginal wetland vegetation. The site is used as a local amenity area for fishing.
332	DARVER CASTLE WETLAND	Area of marsh which contains a number of ditches. Site examined and surveyed in 2013 by Dr. Tom Curtis to assess proposed infill application for the site.

5.1.3 Floral Observations

Floral observations and records made on the sites surveyed are included in the County Louth Wetland Survey database. Plant species lists for each site surveyed are included in the site reports presented in Appendix 5. These data records will be submitted to the National Biodiversity Data Centre (NBDC).

The following records of invasive alien species are of note:

Himalayan Balsam (*Impatiens glandulifera*) – invasive species. Found at KILLIN (LH291). Recommendations are made in the site report to eradicate this invasive non native species.

Japanese Knotweed (*Fallopia japonica*) – invasive species. Found at MARSH NORTH WET GRASSLAND (LH220). Recommendations are made in the site report to eradicate this invasive non native species.

5.1.4 Faunal Observations

Fauna associated with wetland habitats that were observed during the field survey, are recorded in the LWS III database. Species recorded on the sites surveyed are included in the site reports presented in Appendix 5. These data records will be submitted to the NBDC.

5.1.5 Site Conservation Assessment

On completion of the LWS III fieldwork, each of the seventy nine sites were reviewed and given a site conservation rating using the criteria presented in Appendix 4 (from NRA 2009). The site conservation rating for sites surveyed during 2014 is presented in Table 3 below.

Of the seventy nine sites surveyed in 2014, three sites are ranked nationally important (B); six are ranked county conservation value (C+) (see Table 3). Nine sites are therefore deemed to be of county importance or greater. Four of these sites had previously been recognised as being of conservation interest by being listed as candidate Natural Heritage Areas (cNHA) or proposed Natural Heritage Areas (NHA) by the National Parks and Wildlife Service.

Table 3: Conservation evaluation of sites surveyed in detail in County Louth during the Louth Wetland Survey III.

Site Code	Site name	Conservation Ranking After Survey
165	BALLYMAKELLETT LANDS cNHA	B Rating: Nationally Important
161	BARMEATH WOODS cNHA	B Rating: Nationally Important
230	SLIEVENAGLOGH	B Rating: Nationally Important
268	CROSSABEAGH	C+ Rating: County Conservation value
203	DRUMGONNELLY	C+ Rating: County Conservation value
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	C+ Rating: County Conservation value
328	NOOTKA - GREENORE WETLANDS	C+ Rating: County Conservation value
223	PLASTER	C+ Rating: County Conservation value
315	ROXBOROUGH AND BANKERSTOWN	C+ Rating: County Conservation value
193	ALLARDSTOWN AND KILLINCOOLE	C Rating: Local conservation value (high value)
182	BARNATTIN RESERVOIR	C Rating: Local conservation value (high value)
250	BEAULIEU NORTH	C Rating: Local conservation value (high value)
269	CROWMARTIN	C Rating: Local conservation value (high value)
270	CUNNICAR	C Rating: Local conservation value (high value)
206	FEEDE	C Rating: Local conservation value (high value)
288	JENKINSTOWN AND MULLAGHATTIN	C Rating: Local conservation value (high value)
218	LIBERTIES OF CARLINGFORD WEST	C Rating: Local conservation value (high value)
329	MULLABANE	C Rating: Local conservation value (high value)
314	ROXBOROUGH	C Rating: Local conservation value (high value)
322	THOMASTOWN AND RATHNEESTIN	C Rating: Local conservation value (high value)
234	AGHAGLASS	D Rating: Local conservation value (moderate value)
195	BALLYNAHATTIN AND REDCOW	D Rating: Local conservation value (moderate value)
245	BALRIGGAN	D Rating: Local conservation value (moderate value)
248	BAVAN	D Rating: Local conservation value (moderate value)
332	DARVER CASTLE WETLAND	D Rating: Local conservation value (moderate value)
279	EMLAGH	D Rating: Local conservation value (moderate value)
209	GRANGE	D Rating: Local conservation value (moderate value)
213	JENKINSTOWN AND BELLURGAN	D Rating: Local conservation value (moderate value)
219	LOUTH HALL	D Rating: Local conservation value (moderate value)
300	LOUTH HALL AND RATHEESTIN	D Rating: Local conservation value (moderate value)
222	PART OF HARRISTOWN	D Rating: Local conservation value (moderate value)
224	RAMPARK	D Rating: Local conservation value (moderate value)
327	ROXBOROUGH QUARRY	D Rating: Local conservation value (moderate value)

Site Code	Site name	Conservation Ranking After Survey
191	AGHNASKEAGH	E Rating: Local conservation value (low value)
244	BALLYNAHATTIN	E Rating: Local conservation value (low value)
197	CARDISTOWN	E Rating: Local conservation value (low value)
273	DROMISKIN NORTH	E Rating: Local conservation value (low value)
207	GALLSTOWN	E Rating: Local conservation value (low value)
211	HAYNESTOWN	E Rating: Local conservation value (low value)
226	RATHNEETY	E Rating: Local conservation value (low value)
231	THOMASTOWN	E Rating: Local conservation value (low value)
190	AGHAMEEN	E Rating: Local conservation value (low value)
192	ALLARDSTOWN	E Rating: Local conservation value (low value)
194	ARTNALEVERY	E Rating: Local conservation value (low value)
241	BALLINFUIL	E Rating: Local conservation value (low value)
243	BALLYNAGRENA	E Rating: Local conservation value (low value)
196	BALLYONAN	E Rating: Local conservation value (low value)
246	BALTRAY	E Rating: Local conservation value (low value)
254	CARRICKALLAN AND MULLABOHY	E Rating: Local conservation value (low value)
198	CARRICKANEENA	E Rating: Local conservation value (low value)
199	CASTLETOWNCOOLEY HEATH	E Rating: Local conservation value (low value)
200	CLONALEENAGHAN	E Rating: Local conservation value (low value)
201	CLUIDE	E Rating: Local conservation value (low value)
265	COLLON WEST	E Rating: Local conservation value (low value)
266	CORBOLLIS	E Rating: Local conservation value (low value)
202	CRUMLIN	E Rating: Local conservation value (low value)
204	DRUMGOWNA AND MUFF	E Rating: Local conservation value (low value)
205	DUNGOOLY	E Rating: Local conservation value (low value)
282	FEEDE AND DRUMAD	E Rating: Local conservation value (low value)
208	GLENMORE	E Rating: Local conservation value (low value)
210	GRANGE IRISH	E Rating: Local conservation value (low value)
212	JENKINSTOWN	E Rating: Local conservation value (low value)
214	KILCRONEY AND CORDERRY	E Rating: Local conservation value (low value)
290	KILLEEN	E Rating: Local conservation value (low value)
291	KILLIN	E Rating: Local conservation value (low value)
215	LACKNAGREAGH	E Rating: Local conservation value (low value)
216	LANNAT EAST	E Rating: Local conservation value (low value)
217	LIBERTIES OF CARLINGFORD AND COMMONS	E Rating: Local conservation value (low value)
298	LISDOO	E Rating: Local conservation value (low value)
220	MARSH NORTH WET GRASSLAND	E Rating: Local conservation value (low value)
304	MODEL FARM	E Rating: Local conservation value (low value)
305	MONEYCROCKROE	E Rating: Local conservation value (low value)
221	MOUNTBAGNALL	E Rating: Local conservation value (low value)
306	MOUNTRUSH	E Rating: Local conservation value (low value)
227	REDCOW	E Rating: Local conservation value (low value)
228	ROOTATE NORTH	E Rating: Local conservation value (low value)
330	ROSEHALL RESERVOIR	E Rating: Local conservation value (low value)
229	ROSSLOUGH	E Rating: Local conservation value (low value)
232	TULLY	E Rating: Local conservation value (low value)
293	KILLINEER	F Rating: Unknown value - survey required
225	RATHMORE	F Rating: Unknown value - survey required

5.2 Overview of Results of LWS 2011-2014

This section presents a brief review of the information gathered during the course of the three years of the Louth Wetland Survey.

A total of 308 discrete wetland sites have been identified within the county covering an area of ca 125.9km² (12,586ha). This includes a significant area of non-wetland habitats that occur within the sites. Further

information on the extent of wetland habitats within the county, threats and damage to wetlands within the county, and the conservation evaluation of wetlands within the county, is presented in the following sections.

5.2.1 Wetland Habitats of County Louth

The extent of the main wetland habitats recorded within the county are presented in Table 4. The total area of wetland habitats mapped within the county is 2,457.9ha.

The extent of EU Annex I wetland habitats within the county is presented in Table 5.

Table 4: Extent of the principal wetland habitats of County Louth as mapped within the Louth Wetland Survey III GIS dataset.

Fossitt Code	Fossitt Name	Length (km)	Area (ha)
CM1	Lower salt marsh		446.7
CW1	Lagoons and saline lakes		2.1
FL	Lakes and ponds		65.8
FL1	Dystrophic lakes		1.3
FL2	Acid oligotrophic lakes		1.4
FL4	Mesotrophic lakes		15.6
FL5	Eutrophic lakes		6.2
FL7	Reservoirs		20.0
FL8	Other artificial lakes and ponds		17.9
FS	Freshwater swamps		209.7
FS1	Reed and large sedge swamps		208.4
FS2	Tall herb swamp		1.3
FW	Watercourses	75.8	
FW1	Eroding / upland rivers	1.0	
FW2	Depositing / lowland rivers	14.3	
FW4	Drainage ditches	60.5	
GM1	Marsh		88.0
GS4	Wet grassland		217.5
HH3	Wet heath		477.0
MW4	Estuaries		214.1
PB	Bogs		217.4
PB2	Upland blanket bog		20.4
PB3	Lowland blanket bog		10.5
PB4	Cutover bog		186.5
PF	Fen and flush		294.1
PF1	Rich fen and flush		24.6
PF2	Poor fen and flush		111.4
PF3	Transition mire and quaking bog		158.1
WN	Semi-natural woodland (wet)		225.4
WN4	Wet pedunculate oak-ash woodland		28.0
WN6	Wet willow-alder-ash woodland		78.6
WN7	Bog woodland		118.7
Total area of wetland habitat mapped in county louth		75.8	2457.9

Notes: In the case of mosaic habitats, the entire area was assigned to the dominant habitat of the mosaic.

Table 5: Extent of the EU Annex I wetland habitats of County Louth as mapped within the Louth Wetland Survey III GIS dataset.

EU Annex I Code	Annex I Habitat	Area (ha)
7130	Blanket bog (*active only)	58.7
1130	Estuaries	214.1
1140	Mudflats and sandflats not covered by seawater at low tide	2397.4
1150	*Coastal lagoons	0.8
1310	Salicornia and other annuals colonizing mud and sand	111.3
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	33.4
3160	Natural dystrophic lakes and ponds	0.8
4010	Northern Atlantic wet heaths with <i>Erica tetralix</i>	435.2
7140	Transition mires and quaking bogs	156.3
7150	Depressions on peat substrates of the Rhynchosporion	49.6
7210	*Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	2.3
7230	Alkaline fens	25.4
91E0	*Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	0.9
Total area of Annex I wetland habitats mapped within County Louth		3486.2

Note: These areas can be regarded as the minimum area present as many habitat datasets would not have identified EU Annex I habitats.

5.2.2 Threats and Damage to County Louth Wetlands

The majority of, if not all, Irish wetland sites, and by extension those in county Louth, 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 declining in extent due to such activities (NPWS 2008; Foss & Crushell 2007; Foss 2007). A summary table of impacts and the wetland types most affected is presented in Table 6 below.

Wetlands, (bog, fen and marsh areas in particular) have historically been regarded as less productive than adjacent agricultural land and measures have been taken to 'improve' their value for agriculture. The principal method of land improvement usually involved one or more of the following; drainage, infill or soil redistribution, burning, and addition of nutrients. These activities were undertaken so as to facilitate either: the removal of peat; the planting of trees; or the creation of new grazing areas, pasture or arable farmland.

Historical evidence indicates that peatlands or bogs, and by extension fens and other associated wetlands, were increasingly utilised by the growing population throughout Ireland. The removal of peat by this growing population resulted in many worked out bogs, which when abandoned became ideal locations for the formation of secondary wetland habitats (fen, marsh and wet woodland etc).

A more recent trend has been the use of wetlands as areas to dispose of building rubble, rubbish, and landfill materials (Foss & Crushell 2007; Monaghan County Council 2006; Foss *et al.* 2011 & 2012).

Reclamation and drainage works are ongoing agricultural management techniques which affect the hydrology of wetland habitats.

The NPWS report on the conservation status of EU Habitats in Ireland (NPWS 2008) found that the conservation status of these habitats is far from satisfactory. In fact the overall assessment for wetland habitat types listed under the EU Habitats Directive found that only four habitats were in overall favourable

conservation status, while seven were poor and 16 habitat types were deemed to be in bad conservation status.

Included in the latter bad conservation status category were habitats such as; Oligotrophic and Hard water lakes, Raised bog (active and degraded), Blanket bogs, Wet heath, Transition mires, Alkaline fens, and Alluvial wet woodland; while habitats defined as being in poor conservation status included: Turloughs, Tall herb swamps, and Bog woodland.

Table 6: Natura 2000 Impacts and Activities 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	Impacts and Activities Category with brief description	Wetland habitat types most at threat or likely to be affected from Impacts and Activities
A	Agriculture <i>Including cultivation, fertilization abandonment, and over grazing</i>	Fens, Marsh, Raised bog, Wet heath, Reed swamp, Lake and Lake margins, Ponds, Wet grassland, Wet woodland, Bog woodland, Rivers
B	Sylviculture, forestry <i>Including fertilisation, planting and re-planting, forestry practices</i>	Fens, Marsh, Raised bog, Wet heath, Reed swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Turlough, Rivers
C	Mining, extraction of materials and energy production <i>Including quarry activities, turbary and peat removal</i>	Raised bog, Dystrophic lake, Bog woodland
D	Transportation and service corridors <i>Including road construction, power transmission</i>	All wetland types
E	Urbanisation, residential and commercial development <i>Including Urban and industrial development, discharges and waste disposal</i>	Fen, Bog, Marsh, Wet Grassland, Scrub
F	Biological resource use other than agriculture & forestry <i>Including leisure fishing, hunting</i>	Lake, Fen, Marsh, River, Bog
G	Human intrusions and disturbances <i>Including recreational facilities, outdoor leisure activities, littering, trampling overuse</i>	Bog, Fen, Marsh, Reed Swamp, Wet Grassland
H	Pollution <i>Including surface and groundwater water pollution, air pollution</i>	Oligotrophic Lake, River, Marsh, Fen
I	Invasive, other problematic species and genes <i>Including invasive species, genetic pollution</i>	Oligotrophic Lake, River, Marsh, Fen
J	Natural System modifications <i>Including landfill, drainage, drain maintenance, water abstraction, burning</i>	Fen, Marsh, Bog, Reed Swamp, Lake margins, Wet grassland, River
K	Natural biotic and abiotic processes (without catastrophes) <i>Including organic material accumulation</i>	Fen, Marsh, Bog, Wet woodland

During the course of the LWS 2011, 2012 & 2014, different types of damage to wetlands were noted, and an overall assessment of the severity was undertaken where information was available. This was undertaken on all 278 sites surveyed as part of the study (Foss *et al.* 2011, 2012 & 2014). The scale for the severity of damage used was: Not serious; Serious; Very Serious, and Unknown. Table 7 below provides a summary of the damage observed, and the number of sites affected by each activity. The individual site reports presented in Appendix 5 describe all specific threats or damage and the severity of this on each of the wetland sites surveyed in 2014. In many cases more than one damaging activity / threat was recorded on an individual site.

In summary the main activities that are impacting on the conservation interest of wetlands in County Louth include; diffuse water pollution (58), drainage (53 sites), and infilling (37 sites). In all, no impacting activities were recorded from just forty one sites (23%) that were surveyed, however this figure includes those sites where the conservation interest is negligible, in some cases due to damaging activities on these sites.

It is likely that the information recorded 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 LWS database. The LWS 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.

Table 7: The activities which have impacted those sites surveyed as part of the Louth Wetland Survey.

Impacting Activity	Corresponding EU Code(s)	Number of sites	% of sites surveyed
Agricultural intensification	A03.01; A10	9	5
Agricultural abandonment	A04.03	5	3
Intensive grazing	A04.01	4	2
Forestry	B01.02	7	4
Peat extraction	C01.03	3	2
Quarrying	C01	3	2
Waste disposal	E03	12	7
Water pollution / enrichment	H01	58	33
Invasive non-native species	I01	5	3
Infill	J02.01	37	21
Drainage	J02.05	53	30
Water abstraction	J02.06; J02.07	5	3
Transport and service corridors	D	5	3
No impacting activities recorded		41	23

5.2.3 Indicative Conservation Ranking of all wetland in Louth

As part of the final LWS project all 308 sites within the LWS were reviewed and ranked according to their indicative conservation value.

For the 278 sites surveyed as part of the LWS study, the ranking was based on the conservation assessment determined after LWS field survey in 2011, 2012 and 2014.

An indicative assessment was carried out on the remaining 30 sites held in the LWS database. The assessment on these sites also followed the NRA (2009) scheme (see Appendix 4). It is important to note that this ranking is indicative only, as it is based on data of varying quality from a range of different third party sources.

A summary of the results of this ranking are presented in Table 8.

It is recommended that all wetland sites, evaluated as being of county importance or greater (A – International, B – National, C+ - County) are forwarded to the National Parks and Wildlife Service (NPWS) for inclusion on their list of sites for survey and possible designation. These sites should also be listed in future revisions to the Louth Development Plan as areas of significant biodiversity value. A list of those sites that have been evaluated as being of county conservation value or higher is presented in Table 9 and their distribution throughout the county is indicated in Figure 2.

Table 8: Summary conservation evaluation of sites held within the Louth Wetland Survey III site database.

Conservation Evaluation	Based on desktop evaluation	Based on outcome of LWS field survey (278 sites)	Combination (Desktop and Field)
A Rating: Internationally Important	15	6	21
B Rating: Nationally Important	13	40	53
C+ Rating: County Conservation value	2	21	23
C Rating: Local conservation value (high value)	0	44	44
D Rating: Local conservation value (moderate value)	0	61	61
E Rating: Local conservation value (low value)	0	106	106
Total number of sites	30	278	308

Table 9: Sites evaluated as being of county conservation value or higher following the completion of the Louth Wetland Survey 2011, 2012 and 2014.

LWS Site Code	Site Name	LWS Field Survey	Indicative Site Wetland Conservation Ranking
160	BALLYMASCANLAN ESTUARY - DUNDALK BAY SAC	No	A Rating: Internationally Important
19	BELLURGAN (MARSH ROAD) - DUNDALK BAY SAC SPA	Yes	A Rating: Internationally Important
162	BOYNE COAST AND ESTUARY SAC	No	A Rating: Internationally Important
141	BOYNE RIVER ISLANDS NHA - RIVER BOYNE AND RIVER BLACKWATER SAC	No	A Rating: Internationally Important
251	BURREN	Yes	A Rating: Internationally Important
187	CARLINGFORD LOUGH SPA	No	A Rating: Internationally Important
109	CARLINGFORD MOUNTAIN cNHA	No	A Rating: Internationally Important
183	CARLINGFORD MOUNTAIN SAC	No	A Rating: Internationally Important
164	CARLINGFORD SHORE SAC	No	A Rating: Internationally Important
18	CORRAKIT (WINDY GAP) - CARLINGFORD MOUNTAIN SAC	Yes	A Rating: Internationally Important
156	DUNDALK BAY SAC	No	A Rating: Internationally Important
185	DUNDALK BAY SPA	No	A Rating: Internationally Important
125	FLURRY RIVER SITE - DUNDALK BAY SAC	No	A Rating: Internationally Important
150	LURGAN GREEN NORTH - DUNDALK BAY SAC SPA	No	A Rating: Internationally Important
151	MARSH SOUTH - DUNDALK BAY SAC SPA	No	A Rating: Internationally Important
129	RIVER BOYNE AND RIVER BLACKWATER SAC	No	A Rating: Internationally Important
23	ROCKMARSHALL	Yes	A Rating: Internationally Important
25	SHILTIES LOUGH - CARLINGFORD SHORE SAC	Yes	A Rating: Internationally Important
123	STABANNAN / BRAGANSTOWN cNHA	Yes	A Rating: Internationally Important
184	STABANNAN / BRAGANSTOWN SPA	Yes	A Rating: Internationally Important
154	THE LOAKERS MARSH - DUNDALK BAY SAC SPA	No	A Rating: Internationally Important
95	ARDEE CUTAWAY BOG NHA	Yes	B Rating: Nationally Important
62	ARTONEY	Yes	B Rating: Nationally Important
47	BALLAGAN AND WHITESTOWN	Yes	B Rating: Nationally Important
165	BALLYMAKELLETT LANDS cNHA	Yes	B Rating: Nationally Important
161	BARMEATH WOODS cNHA	Yes	B Rating: Nationally Important
107	BOYCETOWN QUARRY cNHA	Yes	B Rating: Nationally Important
158	CARLINGFORD LOUGH cNHA	No	B Rating: Nationally Important
7	CARRAGHCLOUGHAN LAKE	Yes	B Rating: Nationally Important
103	CARRICKBAGGOT	Yes	B Rating: Nationally Important
256	CARRICKNASHANAGH	Yes	B Rating: Nationally Important
120	CARTANSTOWN LOUGH cNHA	Yes	B Rating: Nationally Important
28	CASTLECARRAGH SOUTH	Yes	B Rating: Nationally Important
143	COLLON - MELLIFONT ABBEY WOODS cNHA	Yes	B Rating: Nationally Important
142	COLLON NORTH - MELLIFONT ABBEY WOODS cNHA	No	B Rating: Nationally Important
13	CORTIAL LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	Yes	B Rating: Nationally Important
4	COURTBANE	Yes	B Rating: Nationally Important
112	DARVER CASTLE WOODS cNHA	Yes	B Rating: Nationally Important
15	DRUMCAH LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	Yes	B Rating: Nationally Important
113	Drumcah, Toprass & Cortial Loughs NHA	Yes	B Rating: Nationally Important
64	DRUMGOOLAN	Yes	B Rating: Nationally Important
119	DRUMSHALBON LOUGH cNHA	Yes	B Rating: Nationally Important

LWS Site Code	Site Name	LWS Field Survey	Indicative Site Wetland Conservation Ranking
277	DRUMULLA AND LISLEA	Yes	B Rating: Nationally Important
186	DUNDALK BAY CNHA	No	B Rating: Nationally Important
1	EDENTOBER	Yes	B Rating: Nationally Important
283	GALLAGH	Yes	B Rating: Nationally Important
53	GREENORE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
168	GREENORE WETLANDS	No	B Rating: Nationally Important
74	HOARSTONE	Yes	B Rating: Nationally Important
121	KILDEMOCK MARSH cNHA	Yes	B Rating: Nationally Important
127	KILLINCOOLE MARSH	Yes	B Rating: Nationally Important
297	LIBERTIES OF CARLINGFORD AND MILLGRANGE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
32	LISCARRAGH MARSH NHA	Yes	B Rating: Nationally Important
144	LOUTH HALL AND ARDEE WOODS cNHA	No	B Rating: Nationally Important
9	MAGHAREAGH	Yes	B Rating: Nationally Important
110	MELLIFONT ABBEY WOODS cNHA	Yes	B Rating: Nationally Important
54	MILLGRANGE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
51	MUCHGRANGE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
56	MULLATEE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
308	MULLATEE AND GREENORE - GREENORE WETLANDS	Yes	B Rating: Nationally Important
328	NOOTKA - GREENORE WETLANDS	Yes	B Rating: Nationally Important
116	RATHESCAR WOOD cNHA	Yes	B Rating: Nationally Important
115	REAGHSTOWN MARSH cNHA	Yes	B Rating: Nationally Important
149	RIVER DEE - RIVER FANE/RIVER DEE cNHA	No	B Rating: Nationally Important
148	RIVER FANE - RIVER FANE/RIVER DEE cNHA	No	B Rating: Nationally Important
163	RIVER FANE/RIVER DEE cNHA	No	B Rating: Nationally Important
131	RIVER GLYDE	No	B Rating: Nationally Important
60	ROOTATE	Yes	B Rating: Nationally Important
230	SLIEVENAGLOGH	Yes	B Rating: Nationally Important
14	TOPRASS LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	Yes	B Rating: Nationally Important
5	TREAGH NORTH	Yes	B Rating: Nationally Important
128	TRUMPET HILL cNHA	No	B Rating: Nationally Important
98	TULLAKEEL	Yes	B Rating: Nationally Important
85	WOTTONSTOWN	Yes	B Rating: Nationally Important
237	ANNAVACKY WEST	Yes	C+ Rating: County Conservation value
48	BALLAGAN	Yes	C+ Rating: County Conservation value
255	CARRICKANEENA AND FEEDÉ	Yes	C+ Rating: County Conservation value
145	CASTLETOWNCOOLY	No	C+ Rating: County Conservation value
261	CHANONROCK	Yes	C+ Rating: County Conservation value
66	CORRADORAN LOUGH	Yes	C+ Rating: County Conservation value
268	CROSSABEAGH	Yes	C+ Rating: County Conservation value
203	DRUMGONNELLY	Yes	C+ Rating: County Conservation value
289	KILCRONEY SOUTH	Yes	C+ Rating: County Conservation value
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	Yes	C+ Rating: County Conservation value
8	LURGANKEEL	Yes	C+ Rating: County Conservation value
169	MELL LAKES	Yes	C+ Rating: County Conservation value
147	MUFF (LOUTH)	No	C+ Rating: County Conservation value
223	PLASTER	Yes	C+ Rating: County Conservation value
3	RASSAN BOG	Yes	C+ Rating: County Conservation value
40	RATHCOR LOUGH	Yes	C+ Rating: County Conservation value
57	REDBOG	Yes	C+ Rating: County Conservation value
58	ROSS LOUGH	Yes	C+ Rating: County Conservation value
315	ROXBOROUGH AND BANKERSTOWN	Yes	C+ Rating: County Conservation value

LWS Site Code	Site Name	LWS Field Survey	Indicative Site Wetland Conservation Ranking
97	STORMANSTOWN BOG	Yes	C+ Rating: County Conservation value
321	TANKARDSROCK AND DONAGHMORE	Yes	C+ Rating: County Conservation value
324	WHITECROSS	Yes	C+ Rating: County Conservation value

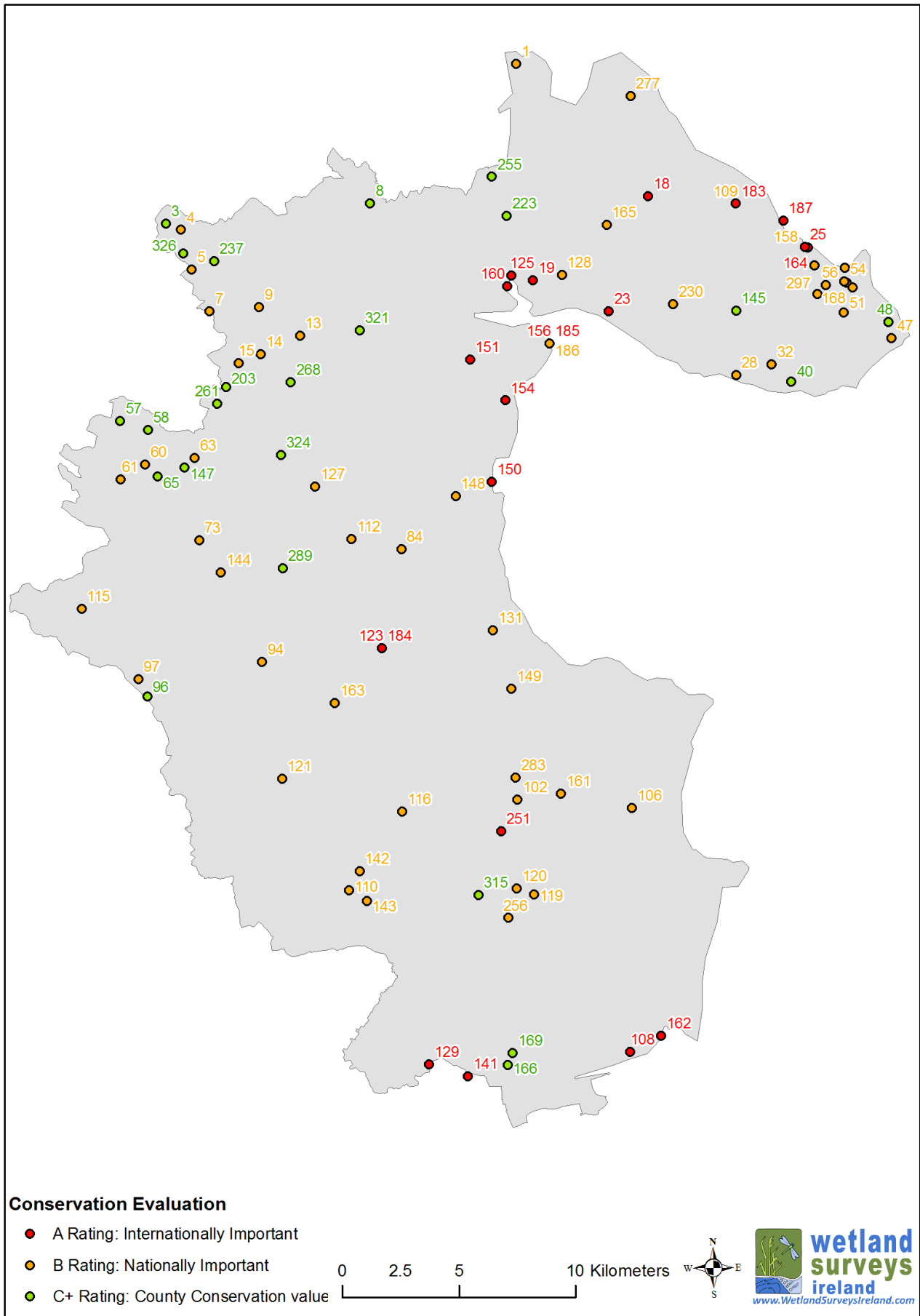


Figure 2: Map showing the distribution of wetland sites of international, national, and county importance within County Louth.

6 Recommendations

6.1 *Distribution and Extent of the Louth Wetland Resource*

The results of the LWS III 2014 shows that the main GIS layer which was developed for the identification of potential wetlands in Louth (Louth Wetland Survey, Foss *et al.* 2012) is a useful tool in identifying wetlands of ecological importance in the county.

Of the seventy nine sites surveyed during 2014 that had been identified in the LWS project 2012 (Foss *et al.* 2012) only a small number no longer supported wetland habitat (see Appendix 1 & 5), and other sites contained significant conservation worthy wetland areas.

6.2 *Site Designations*

It is recommended that all wetland sites, which have been identified in this survey, and rated as either A, B or C+ (of international, national or county importance) are forwarded to the National Parks and Wildlife Service (NPWS) for inclusion on their list of sites for survey and possible designation.

Although the official procedure for designating new Special Areas of Conservation has closed it may be possible for these sites (A or B ranked sites) to be included within the boundary of existing SACs or future NHAs following a boundary revision. These sites should be listed as candidate Natural Heritage Areas to be assessed by NPWS for possible designation as Natural Heritage Areas.

6.3 *Planning Controls*

Sites which are listed as being of county importance (C+) or of high value, local importance (C) and of moderate value, local importance (D) should be highlighted and included in any recommendations made under the County Biodiversity Action Plan or included in local area plans, county development plans or other planning strategies. Again, such recommendations for recognition and listing of sites should be made on a regular basis as further information on the wetland resource of county Louth becomes known.

It is recommended that council planners consult with the GIS layers, which indicate potential wetlands in county Louth, where a development could adversely affect a wetland – through water abstraction, infilling, drainage, etc.

In the event that an application is made that could potentially impact on these sites, a site visit should be conducted by a suitably qualified ecologist to determine the importance and sensitivity of the area.

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
- 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
- The loss of wetland habitats as a result of fragmentation of sites and impacts on wetland hydrology
- The ecological value of wetland habitats adjacent to, and fringing lakes and ponds
- The ecological value of large 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 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 NHA survey – 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 applications that may impact on same.

6.4 Ongoing Maintenance of the County Louth Wetland Map Site Database

It is probable that additional third party survey information on wetland sites listed in the County Louth Wetland site database exists.

It is recommended that this site data is compiled within the database and that it is kept up to date where possible by collating data from additional surveys, EIS documents, etc. This work needs to be done concurrently with ongoing maintenance of the County Louth Wetland Survey GIS dataset and following the naming procedure described in Foss *et al.* 2012.

6.5 Ongoing Maintenance of the County Louth Wetland Map GIS Dataset

Coupled with ongoing updates of the County Louth Wetland survey and site database (Foss *et al.* 2012) it is recommended that the GIS layers are also regularly updated as new information becomes available.

6.6 Hydrological Assessment of Wetland Sites

A hydrological assessment of all sites which have been given a rating of A, B or C+ should be commissioned in order to assist in our understanding the hydrological functioning of these wetlands.

6.7 Management of Wetland Sites

Agricultural activities have the potential to adversely affect wetland habitats. Drainage, infill, land reclamation, and enrichment from fertilizer application are among the agricultural activities that were recorded as damaging the integrity of wetland sites in County Louth during the current study. It is important that, through appropriate agri-environmental schemes, land management practices in the vicinity of wetland sites recognise the value and sensitivity of wetland ecosystems.

6.8 Control of invasive species in wetland sites

It is important that the establishment and spread of invasive species within wetland sites is controlled as they have the potential to adversely affect the biodiversity interest of wetlands, 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*), Indian balsam (*Impatiens glandulifera*), Fringed Water Lily (*Nymphoides peltata*), and Parrot's Feather (*Myriophyllum aquaticum*). It is recommended that all records of invasive species in County Louth are submitted to the Invasive Species Ireland database (<http://www.invasivespeciesireland.com/sighting/>) where advice on control and removal of species is available.

6.9 Local Authority Wetlands Policy

A review of the statutory provisions that govern the management of wetlands in County Louth (such as the Habitats Directive, Wildlife Act, Water Framework Directive, Environmental Liability Directive, Nitrates Directive, Planning Act, etc.) should be conducted and the role of the Local Authority in this regard should be examined. This review could be done in collaboration with other Local Authorities.

Increased co-ordination between agencies in their policy and operative approaches to wetlands need to be strengthened.

6.10 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.
- 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 Louth assists in fulfilling not only obligations under the EU Habitats Directive and the National Biodiversity Plan but also in implementing the Water Framework Directive.

6.11 Public information and interpretation

Public awareness about the importance of the county wetlands could be developed through a series of targeted measures. These could include:

- Specific events county-wide as part of 'biodiversity week' or 'heritage week' which take place annually. Similarly, World Wetlands Day provides an opportunity to hold public events relating to wetlands (further details are available from http://www.ramsar.org/wwd/wwd_index.htm)
- 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
- A workshop on wetland management for landowners and farmers

6.12 Wetland Restoration

Restoration of degraded wetland habitats should be encouraged, in particular the extensive areas of highly modified raised bogs in the western part of the county and potential wetland sites within abandoned quarry sites. Opportunities exist for significant restoration and enhancement works to re-instate part of the biodiversity resource that has been lost due to exploitation of peat and mineral over the past century. Emphasis should be placed on restoring peat forming ecosystems to compensate for some of the ecosystem services that have undoubtedly been lost due to the exploitation of the raised bogs and fens in particular.

6.13 Invertebrates associated with Wetlands

A number of sites examined in 2014 have been identified (see site reports in Appendix 5, Part 2 of final report) which may contain important invertebrate assemblages. Surveys of these groups could be undertaken within the county to increase knowledge of the biodiversity value of these wetlands (e.g. Dragonfly & Damselfly survey; Water Beetle survey, Marsh Fritillary survey). Should field surveys be scheduled for August – October inclusive the presence of breeding Marsh Fritillary butterfly within sites can be confirmed.

7 Bibliography

The bibliography list is presented in alphabetical order by author. Code number appearing on the LHS is the reference/report code number in the LWS Bibliography Database.

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Appendices

In the 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 PDF's were created are included on the CD Rom accompanying this report.

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Appendix 6. Conservation ranking of all sites within the Louth Wetland Survey Site Database based on the LWS 2011, 2012 and 2014	xx

Appendix 1: Louth Wetland Survey III

List of Sites Surveyed in 2014

The list is sorted alphabetically by site name and formatted so as to print on A4 page.

Data presented for each site includes: Site code, Site name, Grid reference, summary site description, EU habitats on site comments, and conservation ranking following survey. (An Excel file version of this table is included on the final project CD that accompanies this report).

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
234	AGHAGLASS	294387.3931	304267.016	This is a linear reedbed at the foot of a valley surrounded by willow scrub. There has been recent infilling of the site in one area.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
190	AGHAMEEN	313267.648	311184.4357	This is a small slope dominated by dense bracken and gorse scrub, there is a very small area of wet grassland but this is no more than 5-10 metres square in extent.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
191	AGHNASKEAGH	307233.3841	312145.783	Former wetland that has been developed within the M1 motorway corridor. No wetland interest. Site has been entirely re contoured and no comprises built land and dry grassy verges.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
192	ALLARDSTOWN	300143.4925	300663.8588	Former wetland that has been drained and infilled. The little wetland vegetation remaining is confined to a drainage ditch that passes through the site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
193	ALLARDSTOWN AND KILLINCOOLE	299540.2413	300331.806	Main part of the site is under willow woodland. Access was not possible due to the presence of large ditch. Aquatic vegetation in ditch (artificial pond) along western part of site.	Woodland possibly conforms to alluvial woodland (EU habitat code 91E0).	C Rating: Local conservation value (high value)
194	ARTNALEVERY	293211.2039	293353.304	Area of degraded marsh, now mostly rank grassland. Some rubble in-filling present. Surrounded by improved grassland which is enriching site. Drainage ditch in centre with some surface water and Lemna minor present.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
241	BALLINFUIL	299941.9728	312459.5638	Northern part of site comprised wet grassland and marsh, with large drainage ditch along northern margin. Species poor wet grassland occurs to southern end of site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
165	BALLYMAKELLE TT LANDS cNHA	311451	312099	This site contains an excellent example of dry siliceous heath with a mosaic of bracken, dry acid grassland and a small area of wet heath. The site should be included within the boundary of the surrounding SAC.	The heathland areas on the site correspond to the Annex I habitat Dry heaths (4030).	B Rating: Nationally Important
243	BALLYNAGRENA	307860.8949	287855.8532	Drained marsh area with wet grassland and willow scrub. Area is grazed by cattle and contains numerous drains.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
244	BALLYNAHATTIN	305085.8327	309854.1677	No significant wetland habitat remains on this site which has been mostly infilled under a waste permit licence granted to McParland Bros Ireland Ltd. for disposal of soil and stones.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
195	BALLYNAHATTIN AND REDCOW	304841.8956	310688.752	This site contains no significant wetland habitat, a deep hollow was excavated to build the railway embankment and this floods seasonally, it has become colonised with alder and willow, scrub on railway embankment at rear of houses. Spring within site damaged by cattle.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
196	BALLYONAN	315886.695	314668.0603	No wetland present, site now afforested or on lower slopes returning to scrub. It is likely that these slopes were wet heath with localised rich flushes in the past as evidenced by vegetation in small seeps along forestry track.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
245	BALRIGGAN	303298.6681	310037.5548	This is a small hollow which is spring fed in the winter but is now infilled with nettle and canary reed grass. Some mature willow and poplar trees are also present.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
246	BALTRAY	314680.6098	277423.5025	No access to the site was possible during the 2014 survey. The site is fenced off from the surrounding road. Grassy verge vegetation surrounds the reservoir on an elevated earth bank.	None likely to occur.	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
161	BARMEATH WOODS cNHA	309487	287640	Site comprises man made eutrophic pond, initially constructed ca 200 years ago by historical landowner. Site is managed as part of estate grounds. POND nutrient enriched and with a complete cover of Lemna minor in 2014.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	B Rating: Nationally Important
182	BARNATTIN RESERVOIR	305098	279091	Very limited marginal wetland vegetation mostly dominated by narrow Phalaris fringe around the edge of the lake.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
248	BAVAN	312888.7707	315889.0618	Small pockets of poor fen with occasional rich flushes occur. Recent clearance works have occurred. Other fields contain wet grassland, acid grassland and scrub.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
250	BEAULIEU NORTH	312717.8974	277431.6897	Site comprises a man made wetland that consists of cutout depressions and back filled soil that has successfully established as a functioning wetland system. Reed swamp and marsh dominate the site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
197	CARDISTOWN	291359.9988	295172.0535	No wetland interest on site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
254	CARRICKALLAN AND MULLABOHY	299298.7131	305651.2456	Small area of what may have been alkaline fen. Site is now damaged through drainage and reverting to wet grassland. A large drainage ditch bisects the site with elements of wet woodland. A small area of transition mire is found at the eastern end.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
198	CARRICKANEEN A	306057.5231	313858.2577	Mix of dry scrub (mostly Ulex) with dense bracken and dry meadow dominated by rank grasses. No wetland interest. Northern part of site recently reclaimed.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
199	CASTLETOWNC OOLEY HEATH	317284.08	307776.7362	This site is dominated by dense bracken and gorse and contains no wetland habitats of value.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
200	CLONALEENAGHAN	296420.5029	310040.4721	This wetland is now reduced to a small area of quaking reed swamp surrounded by willow scrub.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
201	CLUIDE	306282.5199	288825.5972	No access possible during the 2014 survey. Quarry is currently inactive.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
					(NHA).	
265	COLLON WEST	299092.0764	283205.8668	The site is dominated by <i>Juncus effusus</i> wet grassland. Surrounded by narrow band of gorse scrub and hedgerows. Probably improved in the past.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
266	CORBOLLIS	298576.5255	297500.0222	Large stagnant drainage ditch surrounds the site. Aquatic and wetland plants occur within and along this feature. Main part of the site comprises dry mature birch woodland with willow and hawthorn.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
268	CROSSABEAGH	297885.1597	305324.3735	Small quaking transition mire fringed with willows and alder. Small pond with open water at eastern side, may be natural dystrophic pond. Good natural gradation between the various habitats.	Small but relatively intact area of transition mire which conforms to Annex I habitat 7140 of the EU Habitats Directive.	C+ Rating: County Conservation value
269	CROWMARTIN	288240.3752	295231.5882	Vegetation dominated by <i>Sparganium erectum</i> and <i>Carex acutiformis</i> . Frequent tall herbs with scattered willow. Likely to be nutrient enriched.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
202	CRUMLIN	304112.2095	304420.569	Depression between low hills, with narrow reed bed and wet willow woodland. Southern end grazed by cattle. Marginal areas grazed by cattle. Drain runs	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
				through centre.	Directive. Area is a designated Natural Heritage Area (NHA).	
270	CUNNICAR	296773.4168	309033.0711	Area of dried out transition mire either side of track with scattered osier willow at southern margin and some scrub. Some drainage activity within southern portion.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
332	DARVER CASTLE WETLAND	301101	298444	Area of marsh which contains a number of ditches. Site examined and surveyed in 2013 by Dr. Tom Curtis to assess proposed infill application for the site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
273	DROMISKIN NORTH	305421.5945	297979.9808	Area of mature spruce afforestation. No wetland interest.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
203	DRUMGONNELL Y	295109.707	305108.3927	Species rich marsh bisected by occasional drains with standing water and scattered willow. The eastern section has been recently grazed by cattle, while the western section remains ungrazed.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C+ Rating: County Conservation value

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
204	DRUMGOWNA AND MUFF	293257.5542	301022.9487	Small dried out marsh area in landscape hollow. Receiving nutrient enrichment from adjacent cereal crop. Large lateral ditch. Dominated by Epilobium hirsutum and Agrostis stolonifera. Alder scrub is encroaching on the marsh.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
205	DUNGOOLY	300940.8883	313357.185	Juncus effusus dominated semi improved grassland. Mature willow scattered throughout. Wetland interest confined to river along southern boundary.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
279	EMLAGH	295974.283	302161.7957	Drained and degraded area of tall sedge swamp, with willow scrub areas along drainage ditches. Surrounded by tilled land which is providing nutrient input. Deep drains runs through site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
206	FEEDE	307107.2355	313849.8684	Wet grassland grades into a small wet alder woodland. The trees appear even aged and semi-mature. Within the woodland the understory is dominated by grasses and low herbs with frequent bramble.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
282	FEEDE AND DRUMAD	307237.7106	314821.2822	Steep, sloping site mostly dominated by mix of Ulex scrub and dense bracken. Parts of the site are planted with Sitka spruce. Elsewhere exposed siliceous rock and associated heath occur.	European Dry Heath (4030) occurs on steep ground in proximity to rock outcrops.	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
207	GALLSTOWN	307820.7514	284194.5585	The site does not contain any wetland habitats. The site manager for the quarry (Kilsaran Concrete Ltd.) revealed that there was no surface water or ponds present within the site at this time.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
208	GLENMORE	314813.4826	311336.4373	Sloped fields into valley dominated by gorse scrub with open wet grassland areas with Juncus. Grazed by livestock. Only wetland interest on site is stream in valley bottom.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
209	GRANGE	297953.5337	303311.2129	Small area of transition mire with two open bog bean pool surrounded by Iris and Epilobium hirsutum marsh. Drainage ditch drains area. Willow scrub woodland towards north. Degraded and nutrient enriched.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
210	GRANGE IRISH	318761.1667	308821.6474	No obvious wetland habitat present, scrub on slope with improved grassland above and below, enquired locally, no suggestion of any springs present on slopes.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
211	HAYNESTOWN	305405.8908	301563.1101	Conifer forestry plantation. No wetland value on site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
212	JENKINSTOWN	312309.2993	310519.7514	Area of gorse scrub and dry meadow vegetation. Site is unmanaged and is likely to have been a wetland in the recent past. Small watercourse that has been modified and channelised runs through the site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
213	JENKINSTOWN AND BELLURGAN	310854.3692	309942.8771	Large upland site that is dominated by a mix of dense bracken and gorse scrub. Some rock outcrops with associated heath vegetation. No evidence of any significant wetland interest in the site.	European Dry Heath (4030) likely to be present in proximity to outcropping rock.	D Rating: Local conservation value (moderate value)
288	JENKINSTOWN AND MULLAGHATTIN	312797.0724	310663.7302	The upper fields are dominated by a mix of transition mire and willow scrub. Further down slope drainage has had an effect and the grassland becomes progressively drier in character.	This habitat may conform to the Annex I listed habitat Transition mires and quaking bogs (7140).	C Rating: Local conservation value (high value)
214	KILCRONEY AND CORDERRY	298688.8392	298663.0555	Site contains no wetland interest. Some aquatic and emergent plants occur along deep drainage ditch that bisects the site. Improved grassland and arable to south and dry grassy verge vegetation to north.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
290	KILLEEN	293469.5652	300381.518	Small wetland hollow between tilled fields. Contains wet willow woodland with marshy understory. Marginal infilling with rubble and brash cuttings has occurred.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
291	KILLIN	315101	308846	Area of wet and dry heath which is extensively disturbed and broken into fields, with areas of dense gorse scrub. River occurs in valley bottom. No other wetland interest on site. South western part of site walked, remainder examined from a distance.	Small area of European Dry Heath (4030) likely to be present, with areas of Wet Heath (4010) in depressions.	E Rating: Local conservation value (low value)
293	KILLINEER	305143.889	279492.6931	No site access possible during the 2014 survey. It appear that an artificial pond occurs within a disturbed area with bare ground and recolonising bare ground. Possibly managed for quarry extraction.	None are likely to be present.	F Rating: Unknown value - survey required
215	LACKNAGREAGH	296467.3295	307961.0683	There is little in the way of wetland habitat remaining, the upper slopes were planted with a mixture of native and non native tree species surrounding a private house and the lower slopes are drying out and becoming invaded by scrub.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
216	LANNAT EAST	289575.0561	302020.604	Field which is being used for cattle grazing. Wet central area with marshy vegetation with Typha and Filipendula. Scattered willow scrub. Former marsh area.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	307198	276004	Site comprises a large artificial quarry pond and associated cliff face. Rock extraction operations have been abandoned for some time.	No wetland habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA). Survey of grassland	C+ Rating: County Conservation value

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
					and rock faces may reveal habitats that could conform to EU habitat types.	
217	LIBERTIES OF CARLINGFORD AND COMMONS	319145.1721	309601.111	No wetland present, hillside covered in scrub and bracken.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
218	LIBERTIES OF CARLINGFORD WEST	318808.6748	309911.8002	This is a small calcareous spring with rich alkaline fen developed long margins. There is a small area of Schoenus fen with tufa deposits, the lower part of the field is wet grassland which grades into GS2 and dense bracken on higher ground.	Small tufa deposits within clumps of Schoenus nigricans occur within the area.	C Rating: Local conservation value (high value)
298	LISDOO	304493.5095	309498.8527	Small depression in the landscape with degraded reed swamp vegetation surrounded by improved agricultural grassland. Cattle have access to this area.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
219	LOUTH HALL	294125.828	296351.0668	Small lake that is fenced off from surrounding grassland. Narrow margin with Sparganium erectum and Polygonum sp. Some willow saplings occur around lake margin.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
300	LOUTH HALL AND RATHEESTIN	294431.7641	297524.0112	Variable site with a mosaic of wet and dry habitats. Southern part of the site comprises dry grassy verge vegetation which grades into <i>Agrostis stolonifera</i> dominated wet grassland and <i>Carex disticha</i> marsh further north. Narrow band of Alder woodland along northern boundary.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
220	MARSH NORTH WET GRASSLAND	306890.1935	308536.5833	Wet grassland which has been improved through drainage, fertilisation and reseeded. Bounded by deep drainage ditches and hedgerows.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
304	MODEL FARM	304824.9579	297614.8551	Degraded marsh present throughout. Abundance of <i>Iris</i> and <i>Epilobium hirsutum</i> . A mature <i>Salix</i> and <i>Populus</i> treeline forms the south eastern boundary. Site is heavily impacted by drainage and reclamation.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
305	MONEYCROCKR OE	314059.4186	311923.8135	Large field with wet grassland used as rough grazing, and adjacent <i>Molinia</i> wet grassland area. Gorse scrub invading. Only wetland interest within site is stream in base of valley.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
221	MOUNTBAGNALL	315869.0463	306233.8599	Active quarry site with some silt ponds. Most surrounded by bare recolonising ground. No aquatic vegetation. Part of site examined in detail, remainder had no access due to active quarrying.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
					Natural Heritage Area (NHA).	
306	MOUNTRUSH	292006.6527	294384.3543	Intensively managed immature woodland. Low species diversity. Only wetland interest is likely to be confined to water course.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
329	MULLABANE	322000	308100	This is a small reed swamp area in a shallow depression surrounded by improved grassland. There is a natural gradient to the wetland from the surrounding fields.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
328	NOOTKA - GREENORE WETLANDS	320365	310350	This is a large block of wet woodland dominated by alder with frequent ash, willow, and occasional oak, hawthorn and holly. The ground is soft underfoot with frequent liverwort cover.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C+ Rating: County Conservation value
222	PART OF HARRISTOWN	293946.747	293379.7624	Surrounding arable land likely to be causing enrichment via runoff. Dominated by Salix alba growing to 20 m. Little wetland interest.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
223	PLASTER	307152.1569	312481.8045	Wetland interest of the site is confined to the river which is fast flowing comprising a series of riffles separated by small pools and glides. Small patches of alder, ash, willow woodland occurs to northern end of site.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C+ Rating: County Conservation value
224	RAMPARK	314260.2961	307611.4782	Area of dry grassy vegetation in patches between gorse scrub and dense bracken. Used to graze sheep. No wetland present. Most of site covered by dense gorse scrub.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
225	RATHMORE	299899.0856	308293.3704	Unable to access this site, looks wooded.	None likely.	F Rating: Unknown value - survey required
226	RATHNEETY	298642.6868	301837.9348	Site is improved grassland with drainage ditch. Small hollow occurs in field. Bare soil exposed. No wetland occurs on site outside of some Typha growing out of drain.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
227	REDCOW	305953.062	309913.9822	Small area of dense mixed plantation with willow, ash, and pine. Drainage ditch along roadside with common reed. No wetland interest.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
228	ROOTATE NORTH	291654.5309	302436.4417	Small area of willow scrub in landscape depression. Ground layer rough grassland. Drainage ditches occur with adjacent fields. Dried out former marsh area.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area	E Rating: Local conservation value (low value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
					is a designated Natural Heritage Area (NHA).	
330	ROSEHALL RESERVOIR	307030	277375	The site is a water reservoir for the town of Drogheda and has limited wetland value. It is surrounded by mature treelines with little marginal wetland vegetation. The site is used as a local amenity area for fishing.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
229	ROSSLOUGH	292649.9544	303204.1238	Large area of wet grassland and degraded marsh in landscape depression. Numerous drainage ditches in area. Used to graze cattle. No wetland interest.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
314	ROXBOROUGH	306878.63	283286.101	Site comprises an extensive area of marsh habitat in a low lying depression dominated by <i>Iris pseudocorus</i> and <i>Phalaris arundinacea</i> . Substrate conditions are soft.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)
315	ROXBOROUGH AND BANKERSTOWN	305944.1197	283285.0426	Site comprises an area of transition mire with quaking substrate conditions, located in a natural depression. Surrounding habitats include scrub and improved pasture. A stream from the south flows into this wetland system.	This habitat appears to conform to the EU Annex I listed habitat Transition mires and quaking bogs (7140).	C+ Rating: County Conservation value

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
327	ROXBOROUGH QUARRY	310884	293191	A small open water pool and associated wetland community with Typha occurs in the base of an abandoned quarry. Sheer rock walls occurs on the southern side while the northern area is open and grades into agricultural grassland.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	D Rating: Local conservation value (moderate value)
230	SLIEVENAGLOGH	314301.678	308674.674	Rocky upland area with exposed rock and scree, dense bracken and gorse scrub. Area of wet and dry heath occur. Small upland lake with marginal poor fen margin occurs in hanging valley below Slievenaglogh summit.	European Dry Heath (4030) is present in proximity to outcropping rock, with areas of Wet Heath (4010) in depressions. A small lake in the centre of the site may qualify as EU habitat 3130 Oligotrophic to mesotrophic standing waters. EU habitat types 6230 and 8220 may also be present but would require additional surveys to confirm.	B Rating: Nationally Important
231	THOMASTOWN	292415.1059	298355.3337	No wetland interest. Small depression in improved pasture that may flood occasionally during winter. Field reseeded in the past. No wetland indicators present to suggest prolonged inundation.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)
322	THOMASTOWN AND RATHNEESTIN	293138.6105	298426.9036	Broadleaved plantation woodland that comprises a large number of non-native trees, herbs and shrubs. Frequent artificial ponds shaded with abrupt edges supporting some wetland plants. Elsewhere the site is dry underfoot and	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	C Rating: Local conservation value (high value)

Site Code	Site name	Centre Easting	Centre Northing	Report Site Description	Report Survey site EU habitat comments	Conservation Ranking After Survey
				used as an amenity.		
232	TULLY	288096.4416	295761.2851	Main part of site composed of degraded marsh, with wet grassland and scrub occurring together. Extensive extensive network throughout area.	It is not thought any of the habitats present correspond to a habitat listed under Annex I of the EU Habitats Directive. Area is a designated Natural Heritage Area (NHA).	E Rating: Local conservation value (low value)

Appendix 2: Detailed location of sites surveyed in 2014 as part of the Louth Wetland Survey III

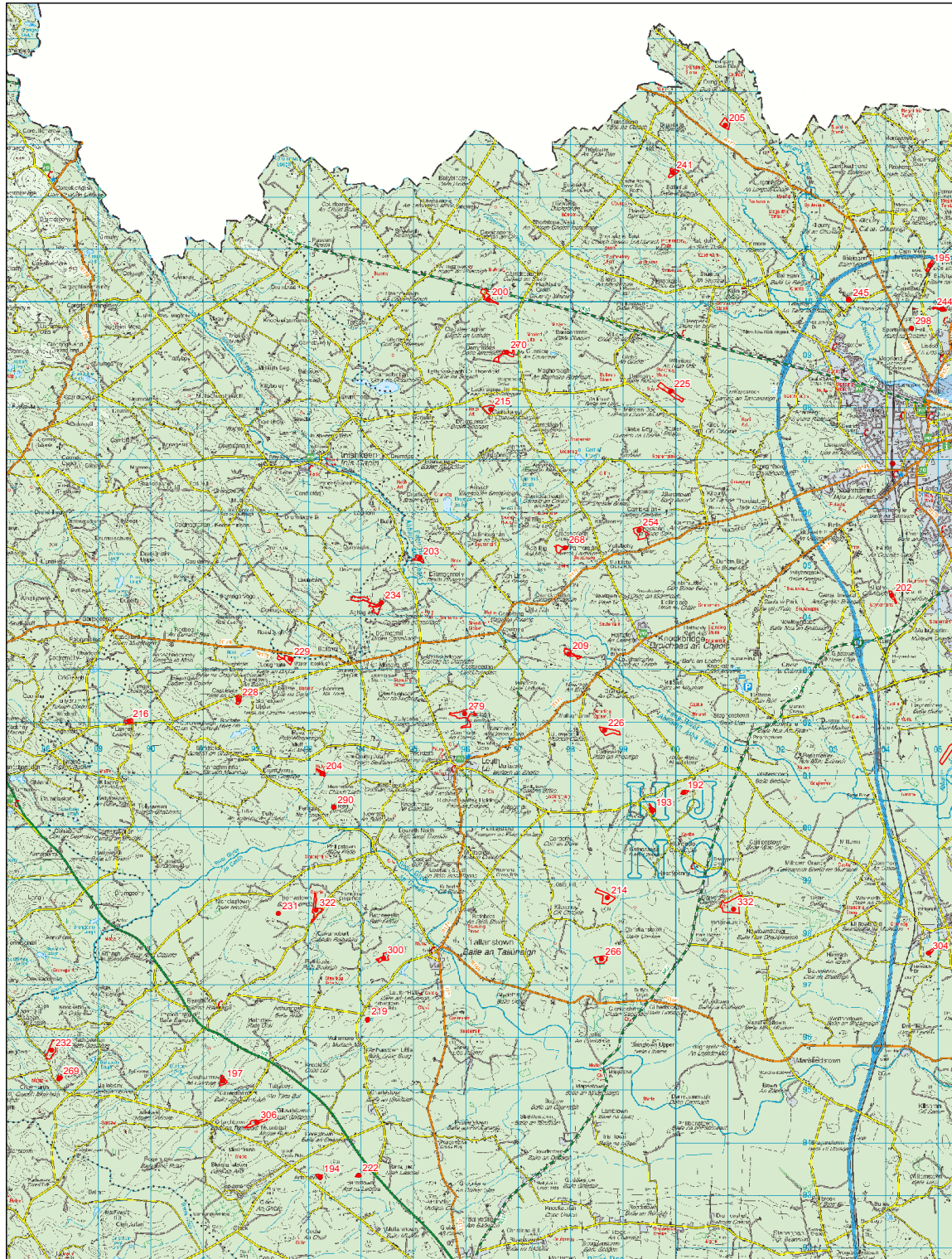
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- LWS 2014 Site Locations
- LWS 2014 Site Boundaries

1:67,178

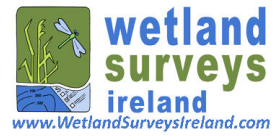
0 2 4 Kilometers

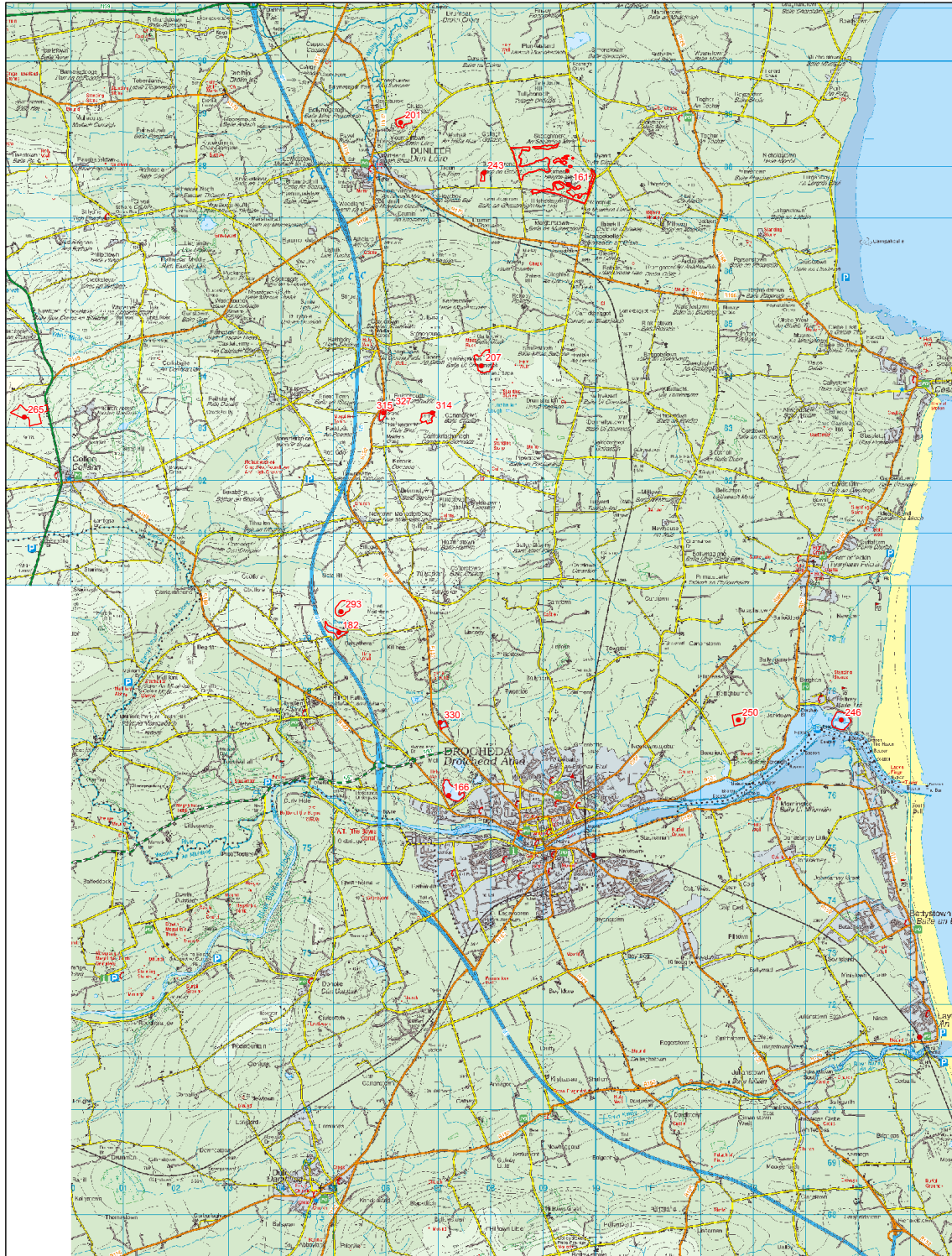


- LWS 2014 Site Locations
- LWS 2014 Site Boundaries

1:67,000

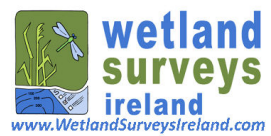
0 2 4 Kilometers





- LWS 2014 Site Locations
- LWS 2014 Site Boundaries

1:67,000



Appendix 3: Field Survey Card used during the LWS III Survey

Louth Wetland Survey 2014 - Survey Card

 Detailed Site Survey Preliminary site inspection *New wetland site not in GIS*

Site Name			Altitude (m)	
County: Louth	Site Code:	Survey Date		
Grid Ref			Photos	
Surveyor(s)			Water Table \pm(cm)	
Substrate type	<input type="checkbox"/> Min Soil <input type="checkbox"/> Clay <input type="checkbox"/> Silt <input type="checkbox"/> Bedrock <input type="checkbox"/> Loose rock <input type="checkbox"/> Rocky till <input type="checkbox"/> Peat <input type="checkbox"/> Tufa			Depth
Stability	<input type="checkbox"/> Very Firm <input type="checkbox"/> Firm <input type="checkbox"/> Some quaking <input type="checkbox"/> Quaking <input type="checkbox"/> Floating mat			
Adjacent habitats (Fossitt codes)				
Conservation Assessment	<input type="checkbox"/> A International <input type="checkbox"/> B National <input type="checkbox"/> C+ County <input type="checkbox"/> C High Local <input type="checkbox"/> D Moderate Local <input type="checkbox"/> E Low Local <input type="checkbox"/> F Unknown – need survey			
Wetland on site:	Fossitt Habitats within site			
Present:	(EU Pr Hab bold / EU Hab Affinities Italic)			
Not wetland:	<input type="checkbox"/> FL1 <i>Dystrophic lakes</i> <input type="checkbox"/> FL2 <i>Acid oligotrophic lakes</i> <input type="checkbox"/> FL3 <i>Limestone/marl lakes</i> <input type="checkbox"/> FL4 Mesotrophic lakes <input type="checkbox"/> FL5 Eutrophic lakes (<i>natural</i>) <input type="checkbox"/> FL6 Turloughs <input type="checkbox"/> FL7 Reservoirs <input type="checkbox"/> FL8 Other artificial lakes and ponds <input type="checkbox"/> FW1 <i>Eroding/upland rivers</i> <input type="checkbox"/> FW2 <i>Depositing/lowland rivers</i> <input type="checkbox"/> FW3 Canals <input type="checkbox"/> FW4 Drainage ditches <input type="checkbox"/> FP1 Calcareous springs <input type="checkbox"/> FP2 Non-Calcareous springs <input type="checkbox"/> FS1 Reed and large sedge swamps <input type="checkbox"/> FS2 <i>Tall herb swamps</i> <input type="checkbox"/> GA1 Improved agricultural grassland <input type="checkbox"/> GA2 Amenity grassland (improved) <input type="checkbox"/> GS1 <i>Dry calcareous & neutral grassland</i> <input type="checkbox"/> GS2 <i>Dry meadows & grassy verges</i> <input type="checkbox"/> GS3 Dry-humid acid grassland <input type="checkbox"/> GS4 Wet grassland <input type="checkbox"/> GM1 <i>Marsh</i> <input type="checkbox"/> HH1 <i>Dry siliceous heath</i> <input type="checkbox"/> HH2 <i>Dry calcareous heath</i> <input type="checkbox"/> HH3 <i>Wet heath</i> <input type="checkbox"/> HH4 <i>Montane heath</i> <input type="checkbox"/> HD1 Dense bracken <input type="checkbox"/> PB1 Raised bogs <input type="checkbox"/> PB2 Upland blanket bog <input type="checkbox"/> PB3 Lowland blanket bog <input type="checkbox"/> PB4 Cutover bog <input type="checkbox"/> PB5 Eroding blanket bog <input type="checkbox"/> PF1 Rich fen/flush (Cladium/Alkaline) <input type="checkbox"/> PF2 Poor fen and flush <input type="checkbox"/> PF3 <i>Transition mire & quaking bog</i> <input type="checkbox"/> WN1 <i>Oak-birch-holly woodland</i> <input type="checkbox"/> WN2 <i>Oak-ash-hazel woodland</i> <input type="checkbox"/> WN3 Yew woodland <input type="checkbox"/> WN4 Wet pedunc oak-ash wood <input type="checkbox"/> WN5 Riparian woodland		<input type="checkbox"/> WN6 Wet willow-alder-ash woodland <input type="checkbox"/> WN7 Bog woodland <input type="checkbox"/> WD1 (Mixed) broadleaved woodland <input type="checkbox"/> WD2 Mixed broadleaved/conifer wood <input type="checkbox"/> WD3 Yew woodland <input type="checkbox"/> WD4 Conifer plantation <input type="checkbox"/> WD5 Scattered trees and parkland <input type="checkbox"/> WS1 Scrub <input type="checkbox"/> WS2 Immature woodland <input type="checkbox"/> WS3 Ornamental/non-native shrub <input type="checkbox"/> WS4 Short rotation coppice <input type="checkbox"/> WS5 Recently-felled woodland <input type="checkbox"/> WL1 Hedgerows <input type="checkbox"/> WL2 Treelines <input type="checkbox"/> ER1 <i>Exposed siliceous rock</i> <input type="checkbox"/> ER2 <i>Exposed calcareous rock</i> <input type="checkbox"/> ER3 <i>Siliceous scree and loose rock</i> <input type="checkbox"/> ER4 <i>Calcareous scree and loose rock</i> <input type="checkbox"/> ED1 Exposed sand, gravel or till <input type="checkbox"/> ED2 Spoil and bare ground <input type="checkbox"/> ED3 Recolonising bare ground <input type="checkbox"/> ED4 Active quarries and mines <input type="checkbox"/> ED5 Refuse and other waste <input type="checkbox"/> BC1 Arable crops <input type="checkbox"/> BC2 Horticultural land <input type="checkbox"/> BC3 Tilled land <input type="checkbox"/> BC4 Flower beds and borders <input type="checkbox"/> BL1 Stone walls and other stonework <input type="checkbox"/> BL2 Earth banks <input type="checkbox"/> BL3 Buildings and artificial surfaces <input type="checkbox"/> CW1 Lagoons and saline lakes <input type="checkbox"/> CW2 <i>Tidal rivers</i> <input type="checkbox"/> CM1 <i>Lower salt marsh</i> <input type="checkbox"/> CM2 <i>Upper salt marsh</i> <input type="checkbox"/> CB1 <i>Shingle and gravel banks</i> <input type="checkbox"/> CD1 <i>Embryonic dunes</i> <input type="checkbox"/> CD2 <i>Marram dunes</i> <input type="checkbox"/> CD3 Fixed dunes <input type="checkbox"/> CD4 <i>Dune scrub and woodland</i> <input type="checkbox"/> CD5 <i>Dune slacks</i> <input type="checkbox"/> CD6 Machair	
Future Survey needed:				
Yes:				
No:				
Suggestion:				
General / Landowner /EU Habs Comments:				

	<i>Aneura ping</i>		<i>Sphag ripar</i>		<i>Cirsium dis</i>		<i>Juncus bulb</i>		<i>Potamo perfol</i>
	<i>Aulocom pal</i>		<i>Sphag squarr</i>		<i>Cirsium pal</i>		<i>Juncus cong</i>		<i>Potamo poly</i>
	<i>Brachy riv</i>		<i>Sphag subnit</i>		<i>Cladium mar</i>		<i>Juncus eff</i>		<i>Pot erecta</i>
	<i>Bry pseudo</i>		<i>Sphag subsec</i>		<i>Dactylor incar</i>		<i>Juncus subn</i>		<i>Pot palust</i>
	<i>Call gig</i>		<i>Thuid tamar</i>		<i>Dactylor macu</i>		<i>Lemna min</i>		<i>Ranunc flam</i>
	<i>Call stram</i>		<i>Toment nit</i>		<i>Dactylor maj</i>		<i>Lemna tri</i>		<i>Ranunc ling</i>
	<i>Call cusp</i>		<i>Agros can</i>		<i>Dactyl glom</i>		<i>Leont autum</i>		<i>Rhynch alba</i>
	<i>Calyp muell</i>		<i>Agrost stol</i>		<i>Descha caes</i>		<i>Littor unifl</i>		<i>Rorrip amph</i>
	<i>Camp stell</i>		<i>Alisma plan aq</i>		<i>Drosera rot</i>		<i>Lotus ulig</i>		<i>Rorrip palus</i>
	<i>Cinc font</i>		<i>Alnus glut</i>		<i>Dryopt affin</i>		<i>Luzula camp</i>		<i>Rumex atosa</i>
	<i>Cladop fluit</i>		<i>Alop genic</i>		<i>Dryopt carth</i>		<i>Luzula mult</i>		<i>Rumex cong</i>
	<i>Clim dend</i>		<i>Anag tenella</i>		<i>Dryopt fx-ma</i>		<i>Lynchnis flos</i>		<i>Rumex hydro</i>
	<i>Craton filicin</i>		<i>Angel sylv</i>		<i>Eleoach mult</i>		<i>Lycopus eu</i>		<i>Salix aur</i>
	<i>Ctenid moll</i>		<i>Anthox od</i>		<i>Eleoach pal</i>		<i>Lysimac nem</i>		<i>Salix cin</i>
	<i>Dicran scop</i>		<i>Apium inunda</i>		<i>Eleoach quin</i>		<i>Lythrum sal</i>		<i>Salix frag</i>
	<i>Drep cosson</i>		<i>Apium nodi</i>		<i>Elodea can</i>		<i>Mentha aq</i>		<i>Salix rep</i>
	<i>Drep revol</i>		<i>Berula erec</i>		<i>Epilob hirs</i>		<i>Menyanthes</i>		<i>Salix vim</i>
	<i>Euclad vertic</i>		<i>Betula pub</i>		<i>Epilob obscur</i>		<i>Molinia</i>		<i>Saxifrag aiz</i>
	<i>Eurhyn prae</i>		<i>Bidens cer</i>		<i>Epilob palu</i>		<i>Myosot laxa</i>		<i>Schoeno lac</i>
	<i>Fiss adian</i>		<i>Bidens tripar</i>		<i>Epilob parvi</i>		<i>Myosot secu</i>		<i>Schoenus</i>
	<i>Font anti</i>		<i>Briza med</i>		<i>Epipactis pal</i>		<i>Myosot scor</i>		<i>Senecio aq</i>
	<i>Hamat verni</i>		<i>Callitrich stag</i>		<i>Equis fluv</i>		<i>Myrica gale</i>		<i>Sparg erec</i>
	<i>Hyloc splend</i>		<i>Calluna vul</i>		<i>Equis pal</i>		<i>Myrioph alter</i>		<i>Sparg min</i>
	<i>Palust comm</i>		<i>Caltha pal</i>		<i>Equis varie</i>		<i>Myrioph spic</i>		<i>Stellar gram</i>
	<i>Palust c v c</i>		<i>Cardam pra</i>		<i>Erica tet</i>		<i>Narth ossi</i>		<i>Stellar pal</i>
	<i>Palust co v fa</i>		<i>Carex curta</i>		<i>Erioph ang</i>		<i>Nastur off</i>		<i>Stellar ulig</i>
	<i>Pellia epi</i>		<i>Carex diand</i>		<i>Erioph lat</i>		<i>Nuphar lut</i>		<i>Succisa prat</i>
	<i>Philon calc</i>		<i>Carex dioic</i>		<i>Erioph vag</i>		<i>Nymph alba</i>		<i>Thelyp pal</i>
	<i>Plagio aff</i>		<i>Carex disti</i>		<i>Eupat cann</i>		<i>Oenanth aq</i>		<i>Trigloc pal</i>
	<i>Plagio ellip</i>		<i>Carex echin</i>		<i>Fest arund</i>		<i>Oenanth croc</i>		<i>Typh ang</i>
	<i>Pleur schre</i>		<i>Carex flac</i>		<i>Fest rub</i>		<i>Parnassia pal</i>		<i>Typha latif</i>
	<i>Polyt comm</i>		<i>Carex hos</i>		<i>Filipend ulm</i>		<i>Pedic palust</i>		<i>Utric austral</i>
	<i>Scleropo pur</i>		<i>Carex lasio</i>		<i>Galium pal</i>		<i>Phalar arund</i>		<i>Utric inter</i>
	<i>Rhizo punc</i>		<i>Carex limosa</i>		<i>Galium sax</i>		<i>Phragmites</i>		<i>Utric minor</i>
	<i>Rhytid squar</i>		<i>Carex nigra</i>		<i>Galium ulig</i>		<i>Pinguic vul</i>		<i>Utric vulg</i>
	<i>Rhytid triq</i>		<i>Carex panic</i>		<i>Glyceria fluit</i>		<i>Plantago lan</i>		<i>Vaccin oxy</i>
	<i>Scorp scorp</i>		<i>Carex pancl</i>		<i>Glyceria not</i>		<i>Poa prat</i>		<i>Valeria offic</i>
	<i>Sphag fimb</i>		<i>Carex pulica</i>		<i>Hippuris</i>		<i>Poa triv</i>		<i>Veron an-aq</i>
	<i>Sphag angus</i>		<i>Carex ros</i>		<i>Holcus lan</i>		<i>Polygala serp</i>		<i>Veron becca</i>
	<i>Sphag capil</i>		<i>Carex brach</i>		<i>Hydrocot vul</i>		<i>Polygo amph</i>		<i>Veron caten</i>
	<i>Sphag cusp</i>		<i>Carex oed</i>		<i>Hyperic elod</i>		<i>Polygo hydro</i>		<i>Veron scutel</i>
	<i>Sphag dent</i>		<i>Carex virid</i>		<i>Hyperic tetrap</i>		<i>Potamo berc</i>		<i>Vicia cracca</i>
	<i>Sphag fallax</i>		<i>Cent nigra</i>		<i>Hypoch rad</i>		<i>Potamo color</i>		<i>Viola pal</i>
	<i>Sphag pal</i>		<i>Cerast font</i>		<i>Iris psuedo</i>		<i>Potamo crisp</i>		<i>Algae</i>
	<i>Sphag papil</i>		<i>Chara spp</i>		<i>Juncus acuti</i>		<i>Potamo lucen</i>		
	<i>Sphag recurv</i>		<i>Cicuta viro</i>		<i>Juncus artic</i>		<i>Potamo obtus</i>		

DAFOR Scale: D - Dominant; A - Abundant; F - Frequent; O - Occasional; R - Rare

Site Description (and faunal records)

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	<p>Internationally important</p> <p>Sites designated (or qualifying for designation) as SAC* or SPA* under the EU Habitats or Birds Directives.</p> <p>Undesignated sites containing good examples of Annex I <u>priority</u> 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.</p> <p>Major salmon river fisheries.</p> <p>Major salmonid (salmon, trout or char) lake fisheries.</p>
B	<p>Nationally important</p> <ul style="list-style-type: none"> • 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 <u>significant numbers</u> 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+	<p>County value</p> <p>Area of Special Amenity.</p> <p>Area subject to a Tree Preservation Order.</p> <p>Area of High Amenity, or equivalent, designated under the County Development Plan.</p> <p>Resident or regularly occurring populations (assessed to be important at the County level) of the following:</p> <ul style="list-style-type: none"> • 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. <p>Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfill the criteria for valuation as of International or National importance.</p> <p>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.</p> <p>Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.</p>
C	<p>High value, locally important</p> <p>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.</p> <p>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.</p> <p>Small water bodies with known salmonid populations or with good potential salmonid habitat.</p> <p>Large water bodies with some coarse fisheries value.</p>
D	<p>Moderate value, locally important</p> <p>Sites containing some semi-natural habitat or locally important for wildlife.</p> <p>Small water bodies with some coarse fisheries value or some potential salmonid habitat.</p> <p>Any water body with unpolluted water (Q-value rating 4-5).</p>
E	<p>Low value, locally important</p> <p>Artificial or highly modified habitats with low species diversity and low wildlife value.</p> <p>Water bodies with no current fisheries value and no significant potential fisheries value.</p>
F	<p>Unknown Value</p> <p>Sites of possible ecological value which require further investigation at the optimum season to establish importance.</p> <p>Sites of possible fisheries value requiring further survey.</p>

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

LWS III Report - Part 2: Site Reports

Appendix 5: Individual Site Reports from the Louth Wetland Survey III (see separate report volumes)

Site Reports Part A: Sites Aghaglass to Glenmore

Site Reports Part B: Sites Grange to Tully

Sites are listed in alphabetical order by site name. Reproduced under OSI Licence number 2014 / 30 / CCMA / Louth Local Authority. Unauthorised reproduction infringes Ordnance Survey Ireland and Government of Ireland copyright. © Ordnance Survey Ireland.

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298	LISDOO	272
219	LOUTH HALL	277
300	LOUTH HALL AND RATHEESTIN	281
220	MARSH NORTH WET GRASSLAND	286
304	MODEL FARM	291
305	MONEYCROCKROE	296
221	MOUNTBAGNALL	301
306	MOUNTRUSH	305
329	MULLABANE	309
328	NOOTKA - GREENORE WETLANDS	314
222	PART OF HARRISTOWN	319
223	PLASTER	324
224	RAMPARK	329
225	RATHMORE	334
226	RATHNEETY	338
227	REDCOW	342
228	ROOTATE NORTH	346
330	ROSEHALL RESERVOIR	351
229	ROSSLOUGH	356
314	ROXBOROUGH	361
315	ROXBOROUGH AND BANKERSTOWN	366
327	ROXBOROUGH QUARRY	371
230	SLIEVENAGLOGH	376
231	THOMASTOWN	382
322	THOMASTOWN AND RATHNEESTIN	386
232	TULLY	391

Appendix 6: Louth Wetland Survey I - III

Complete list of wetland sites recorded in the LWS Site Database and GIS

The list is sorted by conservation ranking and formatted so as to print on A4 page.

Data presented for each site includes: Site code, Site name, Grid reference, date of last survey, conservation ranking following survey and indicative conservation value. (An Excel file version of this table is included on the final project disk with this report).

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
18	CORRAKIT (WINDY GAP) - CARLINGFORD MOUNTAIN SAC	313232	313307	2013	000453 / 005105	Sub-site	A Rating: Internationally Important	
19	BELLURGAN (MARSH ROAD) - DUNDALK BAY SAC SPA	308283	309696	2011	000455 4026	Sub-site	A Rating: Internationally Important	Site was surveyed and ranked E in 2011 for its wetland interest. Upgraded to A due to occurrence within SAC.
23	ROCKMARSHALL	311539	308383	2013		Main Site	A Rating: Internationally Important	
25	SHILTIES LOUGH - CARLINGFORD SHORE SAC	319953	311146	2011	SAC 002306 / pNHA 452/ SPA 4078	Sub-site	A Rating: Internationally Important	
109	CARLINGFORD MOUNTAIN cNHA	317000	313000	2010	005105	Main Site	A Rating: Internationally Important	
123	STABANNAN / BRAGANSTOWN cNHA	301800	293900	2012	000456	Main Site	A Rating: Internationally Important	
125	FLURRY RIVER SITE - DUNDALK BAY SAC	307369	309903			Sub-site	A Rating: Internationally Important	
129	RIVER BOYNE AND RIVER BLACKWATER SAC	303828	276023		002299 (SAC) 004232 (SPA) 005385 (NHA)	Main Site	A Rating: Internationally Important	
141	BOYNE RIVER ISLANDS NHA - RIVER BOYNE AND RIVER BLACKWATER SAC	305500	275500		001862	Sub-site	A Rating: Internationally Important	
150	LURGAN GREEN NORTH - DUNDALK BAY SAC SPA	306518	301044	2006	0455 4026	Sub-site	A Rating: Internationally Important	
151	MARSH SOUTH - DUNDALK BAY SAC SPA	305587	306299	2006	0455 4026	Sub-site	A Rating: Internationally Important	
154	THE LOAKERS MARSH - DUNDALK BAY SAC	307098	304546	2006	0455 4026	Sub-site	A Rating: Internationally	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
	SPA						Important	
156	DUNDALK BAY SAC	309000	307000		000455 (SAC)	Main Site	A Rating: Internationally Important	
160	BALLYMASCANLAN ESTUARY - DUNDALK BAY SAC	307170	309442		001455	Sub-site	A Rating: Internationally Important	
162	BOYNE COAST AND ESTUARY SAC	313796	277245	2007	001957 (SAC) 005290 (NHA)	Main Site	A Rating: Internationally Important	
164	CARLINGFORD SHORE SAC	320095	311115		002306	Main Site	A Rating: Internationally Important	
183	CARLINGFORD MOUNTAIN SAC	317000	313000	2010	000453	Main Site	A Rating: Internationally Important	
184	STABANNAN / BRAGANSTOWN SPA	301800	293900	2012	004091	Main Site	A Rating: Internationally Important	
185	DUNDALK BAY SPA	309000	307000		4026 (SPA)	Main Site	A Rating: Internationally Important	
187	CARLINGFORD LOUGH SPA	319030	312265		004078	Main Site	A Rating: Internationally Important	
251	BURREN	306919	286027	2012		Main Site	A Rating: Internationally Important	
1	EDENTOBER	307569	319001	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of transition mire sites within county.
4	COURTBANE	293169	311871	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C in 2011 for its wetland interest. Upgraded to scarcity of transition mire sites within county.
5	TREAGH NORTH	293630	310175	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C in 2011 for its wetland interest. Upgraded to scarcity of transition

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
								mire sites within county.
7	CARRAGHCLOUGHAN LAKE	294397	308383	2011		Main Site	B Rating: Nationally Important	
9	MAGHAREAGH	296527	308559	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of transition mire sites within county.
13	CORTIAL LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	298473	307334	2011	001462	Sub-site	B Rating: Nationally Important	
14	TOPRASS LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	296823	306410	2011	001462	Sub-site	B Rating: Nationally Important	
15	DRUMCAH LOUGH - DRUMCAH, TOPRASS AND CORTIAL LOUGHS NHA	295757	306025	2011	001462	Sub-site	B Rating: Nationally Important	
28	CASTLECARRAGH SOUTH	317011	305634	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of transition mire sites within county.
47	BALLAGAN AND WHITESTOWN	323674	307214	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Calcareous fens sites within county.
51	MUCHGRANGE - GREENORE WETLANDS	321559	308323	2011		Sub-site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Calcareous fens sites within county.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
								and status as proposed NHA.
53	GREENORE - GREENORE WETLANDS	322045	309445	2011		Sub-site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Calcareous fens sites within county and status as proposed NHA.
54	MILLGRANGE - GREENORE WETLANDS	321657	309657	2011		Sub-site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Calcareous fens sites within county and status as proposed NHA.
56	MULLATEE - GREENORE WETLANDS	320949	309544	2011		Sub-site	B Rating: Nationally Important	
60	ROOTATE	291628	301789	2012		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
62	ARTONEY	294711	300955	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Transition mire sites within county.
64	DRUMGOOLAN	294304	301094	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
								Upgraded to scarcity of Transition mire sites within county.
74	HOARSTONE	294195	300481	2011		Main Site	B Rating: Nationally Important	
85	WOTTONSTOWN	302658	296749	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Transition mire sites within county.
95	ARDEE CUTAWAY BOG NHA	293445	291425	2011	001454	Main Site	B Rating: Nationally Important	
98	TULLAKEEL	289844	294491	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded to scarcity of Transition mire sites within county.
103	CARRICKBAGGOT	310509	285380	2011		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C in 2011 for its wetland interest. Upgraded to scarcity of Transition mire sites within county.
107	BOYGETOWN QUARRY cNHA	313181	289342	2011	002577	Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2011 for its wetland interest. Upgraded in final project analysis due to site extent and faunal records.
110	MELLIFONT ABBEY WOODS cNHA	300400	283500	2010	001464	Main Site	B Rating: Nationally Important	
112	DARVER CASTLE WOODS cNHA	300500	298600	2010	001461	Main Site	B Rating: Nationally Important	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
113	Drumcah, Toprass & Cortial Loughs NHA	297611	306970	2011	001462	Main Site	B Rating: Nationally Important	
115	REAGHSTOWN MARSH cNHA	288903	295587	2012	001828	Sub-site	B Rating: Nationally Important	
116	RATHESCAR WOOD cNHA	302676	286891	2012	002576	Main Site	B Rating: Nationally Important	
119	DRUMSHALBON LOUGH cNHA	308339	283316	2012	002596	Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
120	CARTANSTOWN LOUGH cNHA	307595	283586	2012	002595	Main Site	B Rating: Nationally Important	
121	KILDEMOCK MARSH cNHA	297511	288289	2012	001806	Main Site	B Rating: Nationally Important	
127	KILLINCOOLE MARSH	298930	300855	2012	001802	Main Site	B Rating: Nationally Important	
128	TRUMPET HILL cNHA	309525	309937		001468	Main Site	B Rating: Nationally Important	
131	RIVER GLYDE	306500	294500			Main Site	B Rating: Nationally Important	
32	LISCARRAGH MARSH NHA	318537	306105	2011	001451	Main Site	B Rating: Nationally Important	
142	COLLON NORTH - MELLIFONT ABBEY WOODS cNHA	300845	284331	2005	001464	Sub-site	B Rating: Nationally Important	
143	COLLON - MELLIFONT ABBEY WOODS cNHA	301151	283037	2012	001464	Sub-site	B Rating: Nationally Important	
144	LOUTH HALL AND ARDEE WOODS cNHA	294888	297164	2005	001616	Main Site	B Rating: Nationally Important	
148	RIVER FANE - RIVER FANE/RIVER DEE cNHA	304984	300429		002300	Sub-site	B Rating: Nationally Important	
149	RIVER DEE - RIVER FANE/RIVER DEE cNHA	307361	292166		002300	Sub-site	B Rating: Nationally Important	
158	CARLINGFORD LOUGH cNHA	319030	312265		000452	Main Site	B Rating: Nationally Important	
161	BARMEATH WOODS cNHA	309487	287640	2014	001801	Main Site	B Rating: Nationally Important	
165	BALLYMAKELLETT LANDS cNHA	311451	312099	2014	002574	Main Site	B Rating: Nationally Important	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
168	GREENORE WETLANDS	321744	309604		NA	Main Site	B Rating: Nationally Important	
186	DUNDALK BAY CNHA	309000	307000		005106 (NHA)	Main Site	B Rating: Nationally Important	
230	SLIEVENAGLOGH	314302	308675	2014		Main Site	B Rating: Nationally Important	
256	CARRICKNASHANAGH	307224	282308	2012		Main Site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
277	DRUMULLA AND LISLEA	312471	317621	2012		Main Site	B Rating: Nationally Important	
283	GALLAGH	307550	288331	2012		Main Site	B Rating: Nationally Important	
297	LIBERTIES OF CARLINGFORD AND MILLGRANGE - GREENORE WETLANDS	320489	309114	2012		Sub-site	B Rating: Nationally Important	
308	MULLATEE AND GREENORE - GREENORE WETLANDS	321688	310232	2012		Sub-site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2012 for its wetland value. Upgraded due to scarcity of coastal lagoon sites within county and status as proposed NHA.
328	NOOTKA - GREENORE WETLANDS	320365	310350	2014		Sub-site	B Rating: Nationally Important	Site was surveyed and ranked C+ in 2014. Upgraded due to occurrence of site within the proposed Greenore Wetlands NHA.
163	RIVER FANE/RIVER DEE cNHA	0	0		002300	Main Site	B Rating: Nationally Important	
3	RASSAN BOG	292517	312133	2011		Main Site	C+ Rating: County	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							Conservation value	
8	LURGANKEEL	301298	313023	2011		Main Site	C+ Rating: County Conservation value	
40	RATHCOR LOUGH	319370	305349	2011		Main Site	C+ Rating: County Conservation value	
48	BALLAGAN	323545	307924	2011		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked D in 2011 for its wetland interest. Upgraded to scarcity of Calcareous fens sites within county.
57	REDBOG	290554	303670	2011		Main Site	C+ Rating: County Conservation value	
58	ROSS LOUGH	291747	303276	2011		Main Site	C+ Rating: County Conservation value	
66	CORRADORAN LOUGH	288528	300201	2011		Main Site	C+ Rating: County Conservation value	
97	STORMANSTOWN BOG	291335	292565	2011		Main Site	C+ Rating: County Conservation value	
145	CASTLETOWNCOOLY	317008	308410	2005		Main Site	C+ Rating: County Conservation value	
147	MUFF (LOUTH)	293328	301671	2005		Main Site	C+ Rating: County Conservation value	
166	LEONARD'S CROSS QUARRY cNHA - MELL LAKES	307198	276004	2014	002575	Sub-site	C+ Rating: County Conservation value	
169	MELL LAKES	307413	276508	2012		Main Site	C+ Rating: County Conservation value	
203	DRUMGONNELLY	295110	305108	2014		Main Site	C+ Rating: County Conservation value	
223	PLASTER	307152	312482	2014		Main Site	C+ Rating: County Conservation value	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
237	ANNAVACKY WEST	294593	310538	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked C in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
255	CARRICKANEENA AND FEEDÉ	306520	314152	2012		Main Site	C+ Rating: County Conservation value	
261	CHANONROCK	294739	304415	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked C in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
268	CROSSABEAGH	297885	305324	2014		Main Site	C+ Rating: County Conservation value	
289	KILCRONEY SOUTH	297537	297333	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked C in 2012 for its wetland value. Upgraded due to scarcity of Cladium mariscus sites within county.
315	ROXBOROUGH AND BANKERSTOWN	305944	283285	2014		Main Site	C+ Rating: County Conservation value	
321	TANKARDSROCK AND DONAGHMORE	300841	307559	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked C in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
324	WHITECROSS	297463	302206	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked D in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
326	RASSAN	293250	310894	2012		Main Site	C+ Rating: County Conservation value	Site was surveyed and ranked D in 2012 for its wetland value. Upgraded due to scarcity of Transition mire sites within county.
10	CUNNICAR	297493	309253	2011		Main Site	C Rating: Local conservation value (high value)	
11	NEWTOWNBALREGAN	301172	308885	2011		Main Site	C Rating: Local conservation value (high value)	
12	TANKARDSROCK	301501	308181	2011		Main Site	C Rating: Local conservation value (high value)	
21	JENKINSTOWN	310912	308830	2011		Main Site	C Rating: Local conservation value (high value)	
27	LOUGHANMORE LAKE	314773	306276	2011		Main Site	C Rating: Local conservation value (high value)	
33	MULLAGHATTIN QUARRY	318329	307489	2011		Main Site	C Rating: Local conservation value (high value)	
35	GRANGE POND	319406	307789	2011		Main Site	C Rating: Local conservation value (high value)	
37	GALTRIMSLAND	319421	306342	2011		Main Site	C Rating: Local conservation value (high value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
42	BALLYNAMAGHER	319648	306001	2011		Main Site	C Rating: Local conservation value (high value)	
44	BALLYNAMONY (BRADSHAW)	320987	305849	2011		Main Site	C Rating: Local conservation value (high value)	
61	TULLY (ED KILLANNY)	290658	301114	2011		Main Site	C Rating: Local conservation value (high value)	
78	RICHARD TAAFFES HOLDING	295769	300815	2011		Main Site	C Rating: Local conservation value (high value)	
79	ARDPATRICK	296241	300331	2011		Main Site	C Rating: Local conservation value (high value)	
81	KNOCKATTIN	301110	303043	2011		Main Site	C Rating: Local conservation value (high value)	
82	STEPHENSTOWN POND NHA	301226	302615	2011	001803	Main Site	C Rating: Local conservation value (high value)	
84	NEWTOWN DARVER	302368	298114	2011		Main Site	C Rating: Local conservation value (high value)	
87	NEWRATH	303580	297818	2011		Main Site	C Rating: Local conservation value (high value)	
88	WHITERATH	304437	298020	2011		Main Site	C Rating: Local conservation value (high value)	
90	DROMISKIN	306231	297736	2011		Main Site	C Rating: Local conservation value (high value)	
93	MAPASTOWN	298819	294766	2011		Main Site	C Rating: Local conservation value (high value)	
99	NEWTOWN MONASTERBOICE	305780	282045	2011		Main Site	C Rating: Local conservation	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							value (high value)	
101	TINURE FEN cNHA	305180	283486	2011	002597	Main Site	C Rating: Local conservation value (high value)	
108	BEAULIEU	312461	276554	2011		Main Site	C Rating: Local conservation value (high value)	
130	KEENAN'S CROSS POND	309700	290370	2012		Main Site	C Rating: Local conservation value (high value)	
178	BEGRATH (TULLYALLEN)	302985	279062	2012		Main Site	C Rating: Local conservation value (high value)	
180	CARTANSTOWN	307730	282878	2012		Main Site	C Rating: Local conservation value (high value)	
182	BARNATTIN RESERVOIR	305098	279091	2014		Main Site	C Rating: Local conservation value (high value)	
193	ALLARDSTOWN AND KILLINCOOLE	299540	300332	2014		Main Site	C Rating: Local conservation value (high value)	
206	FEEDE	307107	313850	2014		Main Site	C Rating: Local conservation value (high value)	
218	LIBERTIES OF CARLINGFORD WEST	318809	309912	2014		Main Site	C Rating: Local conservation value (high value)	
235	ANNAGHVACKY	296184	310617	2012		Main Site	C Rating: Local conservation value (high value)	
249	BAWNTAAFFE	305561	282726	2012		Main Site	C Rating: Local conservation value (high value)	
250	BEAULIEU NORTH	312718	277432	2014		Main Site	C Rating: Local conservation value (high value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
269	CROWMARTIN	288240	295232	2014		Main Site	C Rating: Local conservation value (high value)	
270	CUNNICAR	296773	309033	2014		Main Site	C Rating: Local conservation value (high value)	
271	DARVER WETLAND	300248	298356	2012		Main Site	C Rating: Local conservation value (high value)	
274	DRUMIN (ED DUNLEER)	306224	287411	2012		Main Site	C Rating: Local conservation value (high value)	
281	FAIRHILL	303871	305103	2012		Main Site	C Rating: Local conservation value (high value)	
288	JENKINSTOWN AND MULLAGHATTIN	312797	310664	2014		Main Site	C Rating: Local conservation value (high value)	
312	RATHNEESTIN WEST	293680	298338	2012		Main Site	C Rating: Local conservation value (high value)	
313	RAVENSDALE PARK	309295	316786	2012		Main Site	C Rating: Local conservation value (high value)	
314	ROXBOROUGH	306879	283286	2014		Main Site	C Rating: Local conservation value (high value)	
322	THOMASTOWN AND RATHNEESTIN	293139	298427	2014		Main Site	C Rating: Local conservation value (high value)	
329	MULLABANE	322000	308100	2014		Main Site	C Rating: Local conservation value (high value)	
6	TREAGH	293570	309690	2011		Main Site	D Rating: Local conservation value (moderate value)	
17	DRUMASS	295101	307236	2011		Main Site	D Rating: Local	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							conservation value (moderate value)	
20	BELLURGAN	309990	308926	2011		Main Site	D Rating: Local conservation value (moderate value)	
24	LIBERTIES OF CARLINGFORD	319275	311215	2011		Main Site	D Rating: Local conservation value (moderate value)	
34	GALTRIMSLAND SOUTH	319316	306252	2011		Main Site	D Rating: Local conservation value (moderate value)	
38	BALLYNAMAGHER WEST	319411	305870	2011		Main Site	D Rating: Local conservation value (moderate value)	
39	ARDTULLY BEG	319421	306441	2011		Main Site	D Rating: Local conservation value (moderate value)	
43	BALLUG	320194	305813	2011		Main Site	D Rating: Local conservation value (moderate value)	
45	WHITESTOWN COAST	323358	306531	2011		Main Site	D Rating: Local conservation value (moderate value)	
52	MILLGRANGE SOUTH	320790	308702	2011		Main Site	D Rating: Local conservation value (moderate value)	
59	ROSSLOUGH NORTH	292056	303536	2011		Main Site	D Rating: Local conservation value (moderate value)	
68	REAGHSTOWN	290839	298428	2011		Main Site	D Rating: Local conservation value (moderate value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
71	THOMASTOWN (ED TALLANSTOWN)	292366	298578	2011		Main Site	D Rating: Local conservation value (moderate value)	
72	RATHNEESTIN	294057	298375	2011		Main Site	D Rating: Local conservation value (moderate value)	
75	KNOCKMOR	295301	300428	2011		Main Site	D Rating: Local conservation value (moderate value)	
76	MULLAVALLY	296600	301670	2011		Main Site	D Rating: Local conservation value (moderate value)	
80	KILCRONEY	297044	298689	2011		Main Site	D Rating: Local conservation value (moderate value)	
83	DUNMAHON	302520	302309	2011		Main Site	D Rating: Local conservation value (moderate value)	
86	BABESWOOD	302970	297319	2011		Main Site	D Rating: Local conservation value (moderate value)	
89	DROMISKIN WEST	304782	297852	2011		Main Site	D Rating: Local conservation value (moderate value)	
94	GREENLANE	296649	293314	2011		Main Site	D Rating: Local conservation value (moderate value)	
96	COOLE BOG	291720	291816	2011		Main Site	D Rating: Local conservation value (moderate value)	
100	PRIEST TOWN	305690	283433	2011		Main Site	D Rating: Local conservation value	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							(moderate value)	
104	MORGANSTOWN	309066	286740	2011		Main Site	D Rating: Local conservation value (moderate value)	
105	BRIARHILL	310803	286653	2011		Main Site	D Rating: Local conservation value (moderate value)	
146	LANNAT	298152	302305	2012		Main Site	D Rating: Local conservation value (moderate value)	
153	HAMILTON MARSH (BLACKROCK)	306975	303316	2012		Main Site	D Rating: Local conservation value (moderate value)	
174	KILLINEER RESERVIOR	306591	277819	2012		Main Site	D Rating: Local conservation value (moderate value)	
177	BALMER'S BOG (DUNDALK)	304380	306020	2012		Main Site	D Rating: Local conservation value (moderate value)	
189	BOLIES QUARRY	304070	292580	2012		Main Site	D Rating: Local conservation value (moderate value)	
195	BALLYNAHATTIN AND REDCOW	304842	310689	2014		Main Site	D Rating: Local conservation value (moderate value)	
209	GRANGE	297954	303311	2014		Main Site	D Rating: Local conservation value (moderate value)	
213	JENKINSTOWN AND BELLURGAN	310854	309943	2014		Main Site	D Rating: Local conservation value (moderate value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
219	LOUTH HALL	294126	296351	2014		Main Site	D Rating: Local conservation value (moderate value)	
222	PART OF HARRISTOWN	293947	293380	2014		Main Site	D Rating: Local conservation value (moderate value)	
224	RAMPARK	314260	307611	2014		Main Site	D Rating: Local conservation value (moderate value)	
233	ACLINT	289987	297841	2012		Main Site	D Rating: Local conservation value (moderate value)	
234	AGHAGLASS	294387	304267	2014		Main Site	D Rating: Local conservation value (moderate value)	
238	ARTHURSTOWN POND	293202	296516	2012		Main Site	D Rating: Local conservation value (moderate value)	
240	ASH BIG	297544	305775	2012		Main Site	D Rating: Local conservation value (moderate value)	
242	BALLYBARRACK	301994	303894	2012		Main Site	D Rating: Local conservation value (moderate value)	
245	BALRIGGAN	303299	310038	2014		Main Site	D Rating: Local conservation value (moderate value)	
248	BAVAN	312889	315889	2014		Main Site	D Rating: Local conservation value (moderate value)	
253	CARRICKALLAN	298937	305958	2012		Main Site	D Rating: Local conservation value	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							(moderate value)	
257	CARRICKROBIN	297855	308091	2012		Main Site	D Rating: Local conservation value (moderate value)	
258	CARTANSTOWN WEST	307317	283425	2012		Main Site	D Rating: Local conservation value (moderate value)	
260	CAVANROBERT	293295	297947	2012		Main Site	D Rating: Local conservation value (moderate value)	
264	CHRISTIANSTOWN	299519	298630	2012		Main Site	D Rating: Local conservation value (moderate value)	
267	CORTIAL	299289	307114	2012		Main Site	D Rating: Local conservation value (moderate value)	
272	DROMISKIN EAST	306621	297397	2012		Main Site	D Rating: Local conservation value (moderate value)	
278	EDMONDSTOWN	290577	295298	2012		Main Site	D Rating: Local conservation value (moderate value)	
279	EMLAGH	295974	302162	2014		Main Site	D Rating: Local conservation value (moderate value)	
287	HAGGARDSTOWN AND MULLAGHARLIN	305334	303777	2012		Main Site	D Rating: Local conservation value (moderate value)	
294	KILLYCRONEY	298550	306545	2012		Main Site	D Rating: Local conservation value (moderate value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
295	KILLYCRONEY AND CORTIAL	298957	306545	2012		Main Site	D Rating: Local conservation value (moderate value)	
299	LISLEA	310048	316052	2012		Main Site	D Rating: Local conservation value (moderate value)	
300	LOUTH HALL AND RATHEESTIN	294432	297524	2014		Main Site	D Rating: Local conservation value (moderate value)	
310	RATHBODY	292995	297375	2012		Main Site	D Rating: Local conservation value (moderate value)	
318	SHORTSTONE EAST	298701	311224	2012		Main Site	D Rating: Local conservation value (moderate value)	
327	ROXBOROUGH QUARRY	310884	293191	2014		Main Site	D Rating: Local conservation value (moderate value)	
332	DARVER CASTLE WETLAND	301101	298444	2014		Main Site	D Rating: Local conservation value (moderate value)	
2	CARRICKCARNAN	307015	318435	2011		Main Site	E Rating: Local conservation value (low value)	
16	EDENAGRENA	295992	307121	2011		Main Site	E Rating: Local conservation value (low value)	
22	BELLURGAN EAST	311030	308468	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value. Upgraded to E in final project analysis.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
26	RAMPARK LAKE	313678	306564	2011		Main Site	E Rating: Local conservation value (low value)	
29	CASTLECARRAGH	317323	305872	2011		Main Site	E Rating: Local conservation value (low value)	
30	RATHCOR UPPER	318025	306032	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value. Upgraded to E in final project analysis.
31	RATHCOR SOUTH	318414	305246	2011		Main Site	E Rating: Local conservation value (low value)	
36	GALTRIMSLAND POND	319268	306522	2011		Main Site	E Rating: Local conservation value (low value)	
41	RATHCOR LOWER	319780	305300	2011		Main Site	E Rating: Local conservation value (low value)	
46	WHITESTOWN	323746	306901	2011		Main Site	E Rating: Local conservation value (low value)	
49	BALLYNAMONY (MURPHY)	322881	308455	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value. Upgraded to E in final project analysis.
50	BALLYNAMONY (MURPHY) EAST	323089	308501	2011		Main Site	E Rating: Local conservation value (low value)	
55	LIBERTIES OF CARLINGFORD EAST	319442	311401	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
								Upgraded to E in final project analysis.
63	TOOMES	293755	302065	2011		Main Site	E Rating: Local conservation value (low value)	
65	DRUMGOWNA	292169	301278	2011		Main Site	E Rating: Local conservation value (low value)	
67	DRUMARD	289783	299157	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value. Upgraded to E in final project analysis.
69	NICHOLASTOWN (ED TALLANSTOWN)	291525	298342	2011		Main Site	E Rating: Local conservation value (low value)	
70	NICHOLASTOWN SOUTH	291658	298077	2011		Main Site	E Rating: Local conservation value (low value)	
73	RATHNEESTIN NORTH	293951	298549	2011		Main Site	E Rating: Local conservation value (low value)	
77	TULLYCAHAN	295676	301674	2011		Main Site	E Rating: Local conservation value (low value)	
91	WOODTOWN	300530	296072	2011		Main Site	E Rating: Local conservation value (low value)	
92	DERRYCAMMAGH	299955	295600	2011		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2011 for its wetland value. Upgraded to E in final project analysis.
102	GRATTANSTOWN	307612	287382	2011		Main Site	E Rating: Local conservation	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							value (low value)	
106	LABANSTOWN	312534	287040	2011		Main Site	E Rating: Local conservation value (low value)	
155	SPRINGFIELD MARSH (BLACKROCK)	306416	302292	2012		Main Site	E Rating: Local conservation value (low value)	
157	KIRCOCK	306442	282250	2012		Main Site	E Rating: Local conservation value (low value)	
159	BRAGANSTOWN BOG	303853	293552	2012	001120	Main Site	E Rating: Local conservation value (low value)	
170	ARTHURSTOWN	293196	296031	2012		Main Site	E Rating: Local conservation value (low value)	
171	ANNAGHVACKY (HACKBALLSCROSS)	296354	310286	2012		Main Site	E Rating: Local conservation value (low value)	
172	KNOCKAGH	299470	310540	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
173	HAGGARDSTOWN	306052	303183	2012		Main Site	E Rating: Local conservation value (low value)	
179	BIRCH'S LANE (BLACKROCK)	307000	303802	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
181	AGHNASKEAGH RESERVOIR	307898	312633	2012		Main Site	E Rating: Local conservation value (low	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							value)	
190	AGHAMEEN	313268	311184	2014		Main Site	E Rating: Local conservation value (low value)	
191	AGHNASKEAGH	307233	312146	2014		Main Site	E Rating: Local conservation value (low value)	
192	ALLARDSTOWN	300143	300664	2014		Main Site	E Rating: Local conservation value (low value)	
194	ARTNALEVERY	293211	293353	2014		Main Site	E Rating: Local conservation value (low value)	
196	BALLYONAN	315887	314668	2014		Main Site	E Rating: Local conservation value (low value)	
197	CARDISTOWN	291360	295172	2014		Main Site	E Rating: Local conservation value (low value)	
198	CARRICKANEENA	306058	313858	2014		Main Site	E Rating: Local conservation value (low value)	
199	CASTLETOWNCOOLEY HEATH	317284	307777	2014		Main Site	E Rating: Local conservation value (low value)	
200	CLONALEENAGHAN	296421	310040	2014		Main Site	E Rating: Local conservation value (low value)	
201	CLUIDE	306283	288826	2014		Main Site	E Rating: Local conservation value (low value)	
202	CRUMLIN	304112	304421	2014		Main Site	E Rating: Local conservation value (low value)	
204	DRUMGOWNA AND MUFF	293258	301023	2014		Main Site	E Rating: Local conservation value (low value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
205	DUNGOOLY	300941	313357	2014		Main Site	E Rating: Local conservation value (low value)	
207	GALLSTOWN	307821	284195	2014		Main Site	E Rating: Local conservation value (low value)	
208	GLENMORE	314813	311336	2014		Main Site	E Rating: Local conservation value (low value)	
210	GRANGE IRISH	318761	308822	2014		Main Site	E Rating: Local conservation value (low value)	
211	HAYNESTOWN	305406	301563	2014		Main Site	E Rating: Local conservation value (low value)	
212	JENKINSTOWN	312309	310520	2014		Main Site	E Rating: Local conservation value (low value)	
214	KILCRONEY AND CORDERRY	298689	298663	2014		Main Site	E Rating: Local conservation value (low value)	
215	LACKNAGREAGH	296467	307961	2014		Main Site	E Rating: Local conservation value (low value)	
216	LANNAT EAST	289575	302021	2014		Main Site	E Rating: Local conservation value (low value)	
217	LIBERTIES OF CARLINGFORD AND COMMONS	319145	309601	2014		Main Site	E Rating: Local conservation value (low value)	
220	MARSH NORTH WET GRASSLAND	306890	308537	2014		Main Site	E Rating: Local conservation value (low value)	
221	MOUNTBAGNALL	315869	306234	2014		Main Site	E Rating: Local conservation value (low value)	
226	RATHNEETY	298643	301838	2014		Main Site	E Rating: Local conservation	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							value (low value)	
227	REDCOW	305953	309914	2014		Main Site	E Rating: Local conservation value (low value)	
228	ROOTATE NORTH	291655	302436	2014		Main Site	E Rating: Local conservation value (low value)	
229	ROSSLOUGH	292650	303204	2014		Main Site	E Rating: Local conservation value (low value)	
231	THOMASTOWN	292415	298355	2014		Main Site	E Rating: Local conservation value (low value)	
232	TULLY	288096	295761	2014		Main Site	E Rating: Local conservation value (low value)	
239	ARTNALEVERY AND COOKSTOWN	293460	293197	2012		Main Site	E Rating: Local conservation value (low value)	
241	BALLINFUIL	299942	312460	2014		Main Site	E Rating: Local conservation value (low value)	
243	BALLYNAGRENA	307861	287856	2014		Main Site	E Rating: Local conservation value (low value)	
244	BALLYNAHATTIN	305086	309854	2014		Main Site	E Rating: Local conservation value (low value)	
246	BALTRAY	314681	277424	2014		Main Site	E Rating: Local conservation value (low value)	
247	BANKERSTOWN	306318	283160	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
252	CARNALUGHOGE	294690	302354	2012		Main Site	E Rating: Local conservation value (low value)	
254	CARRICKALLAN AND MULLABOHY	299299	305651	2014		Main Site	E Rating: Local conservation value (low value)	
259	CASTLEBELLINGHAM	305915	296393	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
263	CHANONROCK SOUTH	294850	303804	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
265	COLLON WEST	299092	283206	2014		Main Site	E Rating: Local conservation value (low value)	
266	CORBOLLIS	298577	297500	2014		Main Site	E Rating: Local conservation value (low value)	
273	DROMISKIN NORTH	305422	297980	2014		Main Site	E Rating: Local conservation value (low value)	
275	DRUMMULLAGH	313328	317631	2012		Main Site	E Rating: Local conservation value (low value)	
276	DRUMMULLAGH SOUTH	313244	316599	2012		Main Site	E Rating: Local conservation value (low value)	
280	EMLAGH AND COOLCREEDAN	296258	302378	2012		Main Site	E Rating: Local conservation value (low value)	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
282	FEEDE AND DRUMAD	307238	314821	2014		Main Site	E Rating: Local conservation value (low value)	
284	GALLAGH AND BALLYNAGRENA	307612	287956	2012		Main Site	E Rating: Local conservation value (low value)	
285	GILBERTSTOWN	299932	297133	2012		Main Site	E Rating: Local conservation value (low value)	
286	GREATWOOD	287182	295103	2012		Main Site	E Rating: Local conservation value (low value)	
290	KILLEEN	293470	300382	2014		Main Site	E Rating: Local conservation value (low value)	
291	KILLIN	315394	308703	2014		Main Site	E Rating: Local conservation value (low value)	
292	KILLINCOOLE	299859	300570	2012		Main Site	E Rating: Local conservation value (low value)	
296	LANNAT AND TULLYDRUM	288941	301827	2012		Main Site	E Rating: Local conservation value (low value)	
298	LISDOO	304494	309499	2014		Main Site	E Rating: Local conservation value (low value)	
301	MANSFIELDSTOWN	301396	296463	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
302	MARSH NORTH	306368	308586	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
								E in final project analysis.
303	MARSH SOUTH AND HAGGARDSTOWN	307144	304953	2012		Main Site	E Rating: Local conservation value (low value)	Site was surveyed and ranked No Conservation Value in 2012 for its wetland value. Upgraded to E in final project analysis.
304	MODEL FARM	304825	297615	2014		Main Site	E Rating: Local conservation value (low value)	
305	MONEYCROCKROE	314059	311924	2014		Main Site	E Rating: Local conservation value (low value)	
306	MOUNTRUSH	292007	294384	2014		Main Site	E Rating: Local conservation value (low value)	
307	MULLAGHARLIN	304832	303453	2012		Main Site	E Rating: Local conservation value (low value)	
309	MULLATEE EAST	321680	310079	2012		Main Site	E Rating: Local conservation value (low value)	
311	RATHBRIST	296298	297324	2012		Main Site	E Rating: Local conservation value (low value)	
316	SHAMROCKHILL	305326	287777	2012		Main Site	E Rating: Local conservation value (low value)	
317	SHEEPWALK	294781	300228	2012		Main Site	E Rating: Local conservation value (low value)	
319	SHORTSTONE WEST	297716	310961	2012		Main Site	E Rating: Local conservation value (low value)	
320	SUMMERHILL	297936	300996	2012		Main Site	E Rating: Local conservation	

Site Code	Site Name	Centre Easting	Centre Northing	Date of last survey	Designated Site Code	Site Type	Indicative Site Wetland Conservation Ranking	Indicative Site Wetland Conservation Ranking Comment
							value (low value)	
323	TOOMES AND BALLYKELLY	293796	303014	2012		Main Site	E Rating: Local conservation value (low value)	
325	WILLIAMSTOWN	305353	292970	2012		Main Site	E Rating: Local conservation value (low value)	
330	ROSEHALL RESERVOIR	307030	277375	2014		Main Site	E Rating: Local conservation value (low value)	
225	RATHMORE	299899	308293	2014		Main Site	E Rating: Local conservation value (low value)	
293	KILLINEER	305144	279493	2014		Main Site	E Rating: Local conservation value (low value)	

Louth Wetland Survey III (LWS III) 2014 CD ROM Contents

by Peter Foss, Patrick Crushell, Brendan Kirwan, Barry O'Loughlin & Faith Wilson

Contents:

1. **Louth Wetland Survey III 2014. Part 1: Main Report** prepared by Peter J. Foss, Patrick Crushell, Brendan Kirwan, Barry O'Loughlin & Faith Wilson (In PDF format, requires Adobe Acrobat to view).
2. **Louth Wetland Survey III 2014. Part 2: Site Reports Parts A & B** prepared by Peter J. Foss, Patrick Crushell, Brendan Kirwan, Barry O'Loughlin & Faith Wilson (In PDF format, requires Adobe Acrobat to view).

Site Reports Sections A pages 1-197
Site Reports Sections B pages 201-395
3. **Louth Wetland Site Database 2014 Version 3.0; Louth Wetland Survey Database 2014 Version 3.0** (requires Filemaker Pro 8.0 or later format to view).
4. **Louth Wetland Site & Survey Database 2014** Access format (requires MS Access to view).
5. **Excel tables to accompany the Louth Wetland Survey III 2014 report**
 - a. **Report Appendix 1:** Summary information on sites surveyed during the LWS 2014
 - b. **LWS_Survey_Database_Site_Summary:** Summary information on sites survey during the LWS 2014, including site location, site description and conservation ranking.
 - c. **LWS_Survey_Database_total_export:** Total Data Export of all information held within the LWS 2014 site database
6. **GIS Shape files from the Louth Wetland Survey III 2014.**
 - a. ArcView GIS dataset (Requires ArcView 10 GIS Software)
 - b. MapInfo GIS dataset (Requires MapInfo GIS Software)
7. **CD box cover for Louth Wetland Survey III 2014** (in PDF format)

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