

Appendix 8.1 Winter Bird Surveys

**LAOIS – KILKENNY REINFORCEMENT PROJECT: 400/110KV
SUBSTATION INCLUDING ASSOCIATED LINE AND STATION WORKS**

WINTER BIRD SURVEYS

**RESULTS OF WINTER BIRD SURVEYS 2010-2011
(MAR 2010 – APR 2011)**

FINAL REPORT

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CONTENTS

	Page
1 INTRODUCTION AND BACKGROUND	1
1.1 STUDY AREA.....	2
2 METHODOLOGY	4
2.1 DESKTOP STUDY.....	4
2.1.1 <i>Literature review and consultation</i>	4
2.2 FIELD SURVEYS	4
2.2.1 <i>Surveys of wider study area</i>	4
2.2.2 <i>Counts at known water bird sites</i>	5
2.2.3 <i>Dawn and dusk flights</i>	5
3 RESULTS	5
3.1 DESKTOP STUDY	5
3.1.1 <i>Avonmore Ponds, Ballyragget</i>	6
3.1.2 <i>Durrow Curragh</i>	6
3.1.3 <i>Ballycolla (Guilly River)</i>	7
3.1.4 <i>River Nore – Inchbeg</i>	7
3.1.5 <i>River Nore – Foxburrow (Shanahoe Marsh)</i>	8
3.1.6 <i>Other sites surrounding the study area</i>	8
3.2 FIELD STUDY	8
3.2.1 <i>Surveys of wider study area</i>	9
3.2.2 <i>Counts at known water bird sites within study area</i>	10
3.2.3 <i>Counts at known water bird sites surrounding the study area</i>	13
4 DISCUSSION.....	14
5 RECOMMENDATIONS	15
6 REFERENCES	16

LIST OF FIGURES

Figure 1.1: Map showing the location of known water bird sites in relation to the study area.

1 INTRODUCTION AND BACKGROUND

Dr Patrick Crushell was commissioned by AOS Planning to assess the abundance and distribution of wintering wader and wildfowl birds in the study area of two proposed substations (at Ballyragget Co Kilkenny and South East of Portlaoise, Co Laois) and an interconnecting 110 kV powerline (23km straight line).

An ecological constraints study has previously been undertaken for the project by Dr Mark McCorry on behalf of AOS Planning. As part of the constraints study the National Parks and Wildlife Service (NPWS) were consulted. NPWS highlighted the potential for adverse impacts on water birds (waders and wildfowl) that use and move around the various wetland sites in Co. Laois during winter.

Each winter large numbers of waders and wildfowl arrive in Ireland from their northern breeding grounds. There are four species of wader and wildfowl associated (or have been) with inland areas in Ireland that are listed on Annex 1 of the EU Birds Directive (EU 79/409/EEC) (see Table 1.1). There are a further two species that are listed on the red list of Birds of Conservation Concern in Ireland (BoCCI) as reported by Lynas et al. (2007) (see Table 1.1). All of these species are regarded as being of high conservation importance and require protection across their range.

Table 1.1: Water bird species associated with inland areas in Ireland that are listed on Annex 1 of the EU Habitats Directive and or on the BoCCI Red List. The threshold for nationally importance numbers is also presented (1% of national population).

Species	EU Birds Directive	BoCCI (Lynas et al. 2007)	1% National Population (Boland and Crowe 2007)
Bewick's Swan (<i>Cygnus bewickii</i>)	Annex 1	Red List	20
Whooper Swan (<i>Cygnus cygnus</i>)	Annex 1	Amber List	130
Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)	Annex 1	Amber List	110
Golden Plover (<i>Pluvialis apricaria</i>)	Annex 1	Red List	1,700
Curlew (<i>Numenius arquata</i>)		Red List	550
Lapwing (<i>Vanellus vanellus</i>)		Red List	2,100

Collision with powerlines is known to contribute significantly to bird mortality amongst a number of susceptible species especially the larger birds that lack agile flight. Species most at risk include those species that fly at night, birds flying in flocks, large and heavy birds with high wing loading and poor maneuverability, and birds that fly low and fast. (APLIC 1994). Collision with powerlines is a well known cause of mortality among swans, and in the UK has been the highest reported cause of swan mortality (Birkhead and Perrins 1986; Brazil 2003). Collision risk is highest in those areas where powerlines occur nearby areas used by high numbers of these birds and across regularly used flight paths.

This study aims to determine those areas within the study area where collision risk would be greatest and to inform appropriate mitigation measures to reduce any risk of collision.

The study involved both a desktop review of existing data on the occurrence of wintering waders and wildfowl in the study area together with frequent surveys of known water bird sites over two winter seasons (March - April 2010; October 2010 – April 2011). The objective of the study was to determine the distribution of water birds within the study area and if possible, establish any regularly used flight lines.

1.1 STUDY AREA

The proposed 110 kV power line will potentially originate South East of Portlaoise and potentially terminate approximately 23 km to the South West, near Ballyragget, Co Kilkenny (see Figure 1.1). The entire area is dominated by a sparsely populated rural landscape.

The Northern part of the study area lies within the catchment of the River Barrow. This area is characterised by a low-lying intensively farmed agricultural landscape. Further South the study area lies within the River Nore catchment. Part of the Castlecomer Plateau occurs in the eastern portion of the study area. This area has an undulating hilly landscape with some low peaks and intervening valleys, drained in a South-westerly direction by tributaries of the Nore. This geology and environment means that soils are less fertile with impeded drainage and wet pasture is a prominent habitat of these hillsides. Conifer plantations are a feature of this area while heath and bog habitats occur on the higher ground to the east of the study area. The River Nore flows southwards through the western part of the study area and passes close by the proposed substation site at Ballyragget. The western part of the study area is dominated by a low-lying intensively farmed agricultural landscape.

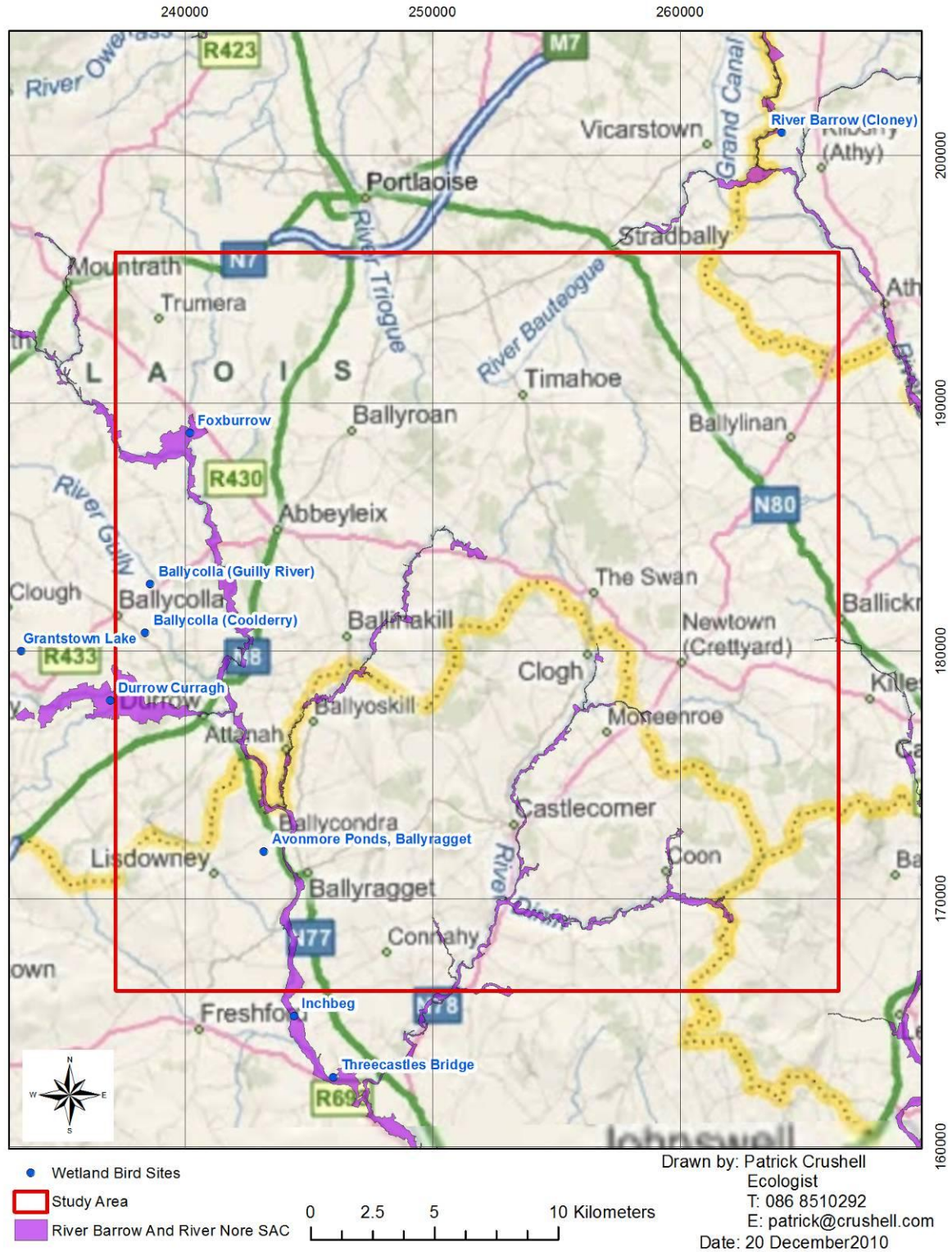


Figure 1.1: Map showing the location of study area of the proposed 110kV powerline and the proposed substations in relation to identified wetland bird sites.

2 METHODOLOGY

2.1 DESKTOP STUDY

2.1.1 Literature review and consultation

A literature review was carried out to identify previous records of water birds (waders and wildfowl) within the study area and surrounding region. Literature sources consulted are included in the text and listed at the rear of the document. Summary I-WeBS (Irish Wetland Birds Survey) data for sites within the study area was purchased from BirdWatch Ireland. In addition, consultation was undertaken with BirdWatch Ireland, the Irish Whooper Swan Study Group and the National Parks and Wildlife Service. Following the collation of background data, wetland bird sites identified as occurring within the study area were surveyed during the field study.

2.2 FIELD SURVEYS

Surveys were carried regularly over the entire study period, the dates on which surveys were conducted together with prevailing weather conditions are presented in Table 2.1. There were three distinct elements to the field surveying:

- Surveys were undertaken of the wider countryside within the study area in an attempt to identify sites regularly used by water birds which may not have been identified during the literature review.
- Monthly counts were undertaken on those sites identified during the literature review as being of importance to water birds.
- Dawn and dusk watches of sites where significant numbers of Whooper Swans were recorded in order to establish flight lines (and flight behavior) of birds flying between feeding and roost sites.

Table 2.1: Survey dates and weather conditions.

Survey Dates	Weather Conditions
4 th - 5 th Mar 2010	No Cloud Cover; Dry / Cold; Light Breeze; Good Visibility
8 th - 9 th Mar 2010	No Cloud Cover; Dry; Calm; Good Visibility
18 th - 19 th Mar 2010	Overcast with sunny periods; Occasional rain/hail showers; Calm; Good visibility between showers
25 th - 26 th Mar 2010	Overcast; Light Drizzle; Calm; Moderate Visibility
2 nd - 4 th Apr 2010	Overcast with sunny periods; Occasional heavy showers; Light NW breeze; Good visibility.
12 th - 13 th Apr 2010	Minimal Cloud Cover; Dry; Calm; Good Visibility
19 th - 20 th Oct 2010	Sunny intervals; Dry; Calm; Good visibility
17 th - 19 th Nov 2010	Sunny intervals; Occasional showers; Moderate wind; Good visibility
30 th - 31 st Dec 2011	Dry; Calm; Good visibility
17 th - 18 th Jan 2011	Sunny intervals; Dry; Calm; Good visibility
23 rd - 24 th Feb 2011	Overcast, Dry, Bright, Sunny, Occasional Showers, Good Visibility
15 th - 16 th Mar 2011	Some Fog During Morning Intervals, Bright, Dry, Clear, Moderate to Good visibility
12 th - 13 th Apr 2011	Overcast, Dry, Bright, Sunny and Rainy Intervals, Good Visibility

2.2.1 Surveys of wider study area

Surveys of the central study area were undertaken during both winter seasons, while during the second season the entire study area was also surveyed. Initially habitats encountered throughout this area were assessed with regards their suitability as potential feeding or roost sites. Following this, efforts were concentrated on those parts that were deemed potentially suitable. Those areas deemed unsuitable included conifer plantations, woodlands, and farmland comprising small fields enclosed by tall hedgerows.

Survey methodology included counts of any wader and wildfowl species encountered. During daylight hours potentially suitable habitat was scanned using binoculars (or telescope) from vantage points at various locations throughout the study area.

Records were made of numbers of wildfowl or wader species, presence of marked birds (leg-ringed or neck-collared), weather conditions and habitat types. During the course of the study no marked birds were recorded.

2.2.2 Counts at known water bird sites

Those sites identified during the literature review as being of known value to water birds were visited regularly during the survey period. Counts were conducted during daylight hours from suitable vantage points using binoculars and / or telescope as required. Records were made of numbers of wildfowl or wader species, presence of marked birds (leg-ringed or neck-collared), weather conditions and habitat types. During the course of the study no marked birds were recorded.

2.2.3 Dawn and dusk flights

Dawn and dusk watches were conducted at various sites where significant numbers of water birds were recorded in order to establish flight lines (and flight behavior) of birds flying between feeding and roost sites.

The location of dusk watches was determined by the presence of feeding birds prior to dusk. Watches were carried out at those sites where the largest flocks were present as dusk approached. Similarly, the location of dawn watches were determined by the presence of roosting birds on the previous evening. Dawn watches commenced approximately one hour before sun-rise and dusk watches continued until an hour following sunset.

3 RESULTS

3.1 DESKTOP STUDY

The desktop study identified five sites within the study area where significant numbers of water birds have been recorded in the past and a further three sites nearby the study area (see Figure 1.1; Table 3.1). A brief description of each site follows.

Table 3.1: Water bird sites that occur within and close-by the study area as identified during the desktop study (see Figure 2 for site locations in relation to study area).

Site Name (Main Site)	Sub-sites	Conservation Status	National Grid Reference
Within study area			
Avonmore	Ponds, N/A	N/A	S 432 719
Ballyragget			
Durrow Curragh		pNHA / SAC	S 370 780
Ballycolla (Guilly River)		N/A	S 387 810
River Nore	Foxburrow (Shanahoe Marsh)	pNHA / SAC	S 402 888
River Nore	Inchbeg	pNHA / SAC	S 440 658
Surrounding study area			
River Nore	Threecastles Bridge	pNHA / SAC	S 460 626
Grantstown Lake		pNHA / NNR	S 335 801
River Barrow (Cloney)	Lowtown; Coolagh; Vicarstown	SAC	N 641 009

3.1.1 Avonmore Ponds, Ballyragget

This site comprises artificial ponds associated with a dairy processing plant (formerly Avonmore, currently Glanbia) located ca 2km North of Ballyragget. Open grassland habitat occurs in the area surrounding the ponds. The site was formerly renowned for consistently supporting nationally important numbers of Golden Plover and Lapwing during the 1980's, however numbers have since declined considerably (Crowe 2005; Sheppard 1993). Peak numbers of each species recorded during I-WeBS counts undertaken between 1998 and 2008 are presented in Table 4. This data confirms the reduced value of the site to wintering birds in recent years.

Table 3.2: Peak counts of species in each I-WeBS season (when counts were done) at Avonmore Ponds, Co. Kilkenny. The number of counts conducted during each season is also indicated (source: BirdWatch Ireland, IWeBS data).

Species	Winter Season			
	1998-1999 (2 Counts)	1999-00 (7 Counts)	2006-07 (7 Counts)	2007-08 (7 Counts)
Mute Swan	14	16		
Whooper Swan	1			
Wigeon		7		
Teal		6		
Mallard		6		
Little Grebe		2		
Moorhen		1		
Coot		4		
Golden Plover	700	1400		
Lapwing	100	260		2
Snipe	2	5	1	
Black-tailed Godwit		48		
Curlew	9	8	18	
Common Sandpiper		1		
Black-headed Gull	4	53	12	
Lesser Black-backed Gull			1	

3.1.2 Durrow Curragh

This site is located ca 3km west of Durrow, County Laois, and approximately 7km north-west of Ballyragget. The site comprises a low-lying grassland area, through which the Erkina River and River Goul flow. The area can be prone to prolonged flooding during winter.

Crowe (2005) deemed the site to be of national importance to water birds due mainly to its importance for Bewick's Swan. In the past, Greenland White-fronted Goose were recorded at the site (NPWS, site description; Crowe 2005). Few counts have been conducted on the site in recent years (see Table 3.3), recent counts indicate that the population of Bewick's Swans no longer utilise the site. The site is included within the River Barrow and River Nore Special Area of Conservation (site code: 2162) and is listed as a proposed Natural Heritage Area (The Curragh and Goul River Marsh, site code: 420).

Table 3.3: Peak counts of species in each I-WeBS season (when counts were undertaken) at Durrow Curragh, Co. Laois. The number of counts conducted during each season is also indicated (source: BirdWatch Ireland, IWeBS data).

Species	Winter Season				
	1994-1995 (4 Counts)	1995-96 (6 Counts)	1996-97 (1 Counts)	1999-00 (1 Swan Count)	2004-05 (1 Swan Count)
Mute Swan	11	11	5		
Bewick's Swan		47	15		
Whooper Swan	6	108	43	5	73
Wigeon		1000			
Mallard	2	50			
Grey Heron	4	2			
Moorhen	1	1			
Golden Plover	3000	500			
Lapwing	500	500			
Snipe	2				
Curlew	50	50	100		
Green Sandpiper	1				
Black-headed Gull	10	50			
Herring Gull	1				

3.1.3 Ballycolla (Guilly River)

The site is located along the floodplain of the Guilly River at Ballycolla and comprises improved pasture. The site is used by Whooper Swans during winter as a feeding and roost site. A count of 32 birds was made during the swan census in 2000, while no birds were recorded at the site during the 2005 swan census (I-WeBS data, Birdwatch Ireland 2010). The site is not designated for nature conservation or under consideration for designation.

During the course of the current study, a further site near Ballycolla, at Coolderry was identified (see Figure 1.1). This site comprises a small agricultural pond with surrounding improved pasture. The site at Coolderry was used throughout much of the study period by Whooper Swans and other water birds (see Section 3.2.2.3 below).

3.1.4 River Nore – Inchbeg

There are a number of places along the River Nore that are of known value to water birds including Shanahoe Marsh (also known as Foxburrow), Inchbeg and Threecastle Bridge. Inchbeg is the only one of these sites located (partly) within the study area, being situated approximately 5 km South of Ballyragget. The site includes wet grassland, marsh and ponds in the floodplain of the River Nore. The site is listed as a proposed Natural Heritage Area (site code: 836) and is located within the River Barrow and River Nore Special Area of Conservation (site code: 2162). The NPWS site synopsis describes the site as being of value to a number of water birds including Golden Plover, Lapwing, Whooper Swan, Bewick's Swan, Curlew, Snipe, Mallard, Wigeon and Teal during winter. During the current study, those water birds observed along the Nore floodplain between Ballyragget and Inchbeg were recorded as occurring within this site.

3.1.5 River Nore –Foxburrow (Shanahoe Marsh)

The site at Foxburrow is also known as Shanahoe Marsh. The site comprises an area of wet grassland, freshwater marsh and fen within the River Nore floodplain. The site is listed as a proposed Natural Heritage Area (site code: 1923) and is located within the River Barrow and River Nore Special Area of Conservation (site code: 2162). According to the NPWS site synopsis for the site, it's main ecological interest is that it is a major roost and feeding ground for a small flock of Greenland White-fronted Geese during the winter, a species listed on Annex I of the EU Birds Directive.

3.1.6 Other sites surrounding the study area

River Nore – Threecastles Bridge: This site comprises wetland habitats (marsh, reed swamp and wet grassland) that occur adjacent to the River Nore at Threecastles Bridge approximately 10 km South of Ballyragget (see Figure 1.1).

River Barrow – Cloney: This site lies along the River Barrow between Athy and Monasterevin, ca 5 km north-east of the study area (see Figure 1.1). It has only been sporadically surveyed in the past and baseline data is lacking to adequately assess its value to water birds. Nationally important numbers (141 peak count) of Whooper Swans have been recorded at the site in the past (Crowe 2005). The site forms part of the Upper Barrow Flood-plain IBA (Important Bird Area), listed by BirdWatch Ireland as being of importance due to the presence of both Whooper Swan and Bewick's Swan (record of 180 birds from 1987) (Birdlife International 2001).

Grantstown Lake: This nature reserve is located just to the West of the study area (see Figure 1.1). The lake is relatively inaccessible and surrounded by woodland. It has only been sporadically surveyed in the past and baseline data is lacking to adequately assess its value to water birds. Large numbers of both Widgeon (1000) and Teal (400) were recorded at the site in December 1995 (Crowe 2005).

3.2 FIELD STUDY

Field surveys were carried regularly over two periods (Mar – Apr 2010 and Oct 2010 – Apr 2011). The months on which surveys of the individual sites were undertaken are presented in Table 3.4. The results of surveys are presented under each site in the following section.

Dates and locations of dawn and dusk watches that were carried out during the study period are presented in Table 3.5. Watches were conducted where Whooper Swans were present at feeding / roost sites in order to determine flight paths undertaken by swans.

Table 3.4: List of sites surveyed throughout the survey period and the frequency of site visits.

	Mar-10	Apr-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11
Sites within study area									
Wider countryside within study area	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avonmore Ponds, Ballyragget	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Durrow Curragh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ballycolla (Coolderry and Gully River)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
River Nore (Foxburrow; Inchbeg;	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
River Nore (Inchbeg)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Foxburrow (Shanahoe Marsh)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sites surrounding study area									
River Nore (Threecastles Bridge)			Yes		Yes	Yes	Yes	Yes	Yes
River Barrow - Cloney (Vicarstown, Dunrally Bridge; Lotown)			Yes	Yes		Yes	Yes	Yes	Yes
Grantstown Lough				Yes		Yes	Yes		Yes

Table 3.5: Location of dawn and dusk watches conducted during the study period March 2010 to April 2011.

Site Name	Mar-10	Apr-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11
Avonmore Ponds	Dusk	Dawn			Dawn		Dawn & Dusk	Dawn & Dusk	
Durrow Curragh	Dawn			Dusk	Dusk	Dusk	Dawn	Dawn	Dusk
Foxburrow (Shanahoe Marsh)			Dusk		Dawn	Dawn			
Ballycolla (Coolderry)	Dusk			Dawn	Dusk				
River Barrow (Cloney)						Dusk			

3.2.1 Surveys of wider study area

During each month, the wider study area was surveyed for the presence of waders and wildfowl from suitable vantage points. Particular attention was paid to the central part of the study area and those areas that were deemed to be of highest potential value to waders and wildfowl based on habitat and topography. In summary, there were very few records of water birds regularly using sites within the wider study area. Small local populations of common water birds such as Mallard, Moorhen and Mute Swan were regularly recorded from Mass Lough, Ballinakill Lake, Lisbigny Pond, Clough and Castlecomer lake (see Table 3.6). The only other site where water birds were regularly observed included the main part of the River Nore North of Ballyragget where small numbers of Little Egret, Cormorant and Mute Swan were recorded.

Elsewhere, only occasional scattered records of waders or wildfowl were made throughout the study period, the most notable of these observations are presented in Table 3.7 below. No additional (previously un-recorded) site of importance to waders or wildfowl within the wider study area was identified during the study. The main populations of water birds recorded during the study were observed at sites previously reported in the literature (see Section 3.2.2 below).

Table 3.6: Peak counts at potential water bird sites in wider study area during period March 2010 to April 2010 and October 2010 – April 2011.

Site	Grid Reference	Peak count
Mass Lough and Ballinakill Lake	S 467 810	Mallard (11), Moorhen (3), Mute Swan (4); Coot (1)
Lisbigney Pond	S 447 799	Mallard (18); Wigeon (6); Moorhen (6); Little Grebe (2)
River Nore (Ballyragget Bridge)	S 444 709	Mallard (6)
River Nore (Tallyho Bridge)	S 423 762	Mute Swan (2); Little Egret (1); Cormorant (1)
Castlecomer Lake	S 536 737	Mallard (8)
Clough	S563 800	Mallard (9); Cormorant (2)

Table 3.7: Records of waders and wildfowl of conservation interest in the wider countryside.

Site	Grid Reference	Date	Observation
Clintstown	S 445 646	30/12/2010	Lapwing (40)
Owenbeg River	S 500 850	4/03/2010	Golden Plover (50)

3.2.2 Counts at known water bird sites within study area

3.2.2.1 Avonmore Ponds, Ballyragget

Counts were conducted at this site on thirteen occasions during the study period from March 2010 to April 2011. Whooper Swans were regularly recorded at the site during the study period with a peak count of 20 birds using the site during February and March 2011 (see Table 3.8). Whooper Swans were observed using open grassland habitat at the site for feeding. Other water birds recorded at the site included low numbers of Curlew.

Dawn and Dusk Watches

Dates on which dawn and dusk watches were carried out at Avonmore Ponds are presented in Table 3.5. Whooper Swans were observed flying north of the feeding site towards Durrow during dusk watches conducted at the site. During dawn watches, Whooper Swans were observed arriving at the feeding site from the North direction. The roost site of these birds was not determined although it is possible that they roost at the Durrow Curragh wetland or Ballycolla, located to the North-west.

Table 3.8: Summary of count data recorded at Avonmore Ponds, Ballyragget, Co Kilkenny during the period March 2010 – April 2011.

	Mar 2010	Apr 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Curlew	9					4			
Whooper Swan	13	3			2	18	20	20	

3.2.2.2 Durrow Curragh

Counts were conducted at Durrow Curragh wetland on thirteen occasions during the study period. Whooper Swans were regularly recorded feeding and roosting on open grassland at the site, with a peak count of 120 individuals recorded on 9th of March 2010 (see Table 3.9). During site visits, Whooper Swans were observed feeding on open agricultural grassland adjacent to the Erkina River. The Durrow Curragh site had the largest population of Whooper Swans throughout the survey period. Other water birds of conservation interest recorded at the site included Golden Plover, Snipe, Lapwing, Kingfisher, Black-headed Gull and Mute Swan (see Table 3.9).

Dawn and Dusk Watches

Dates on which dawn and dusk watches were carried out at Durrow Curragh are presented in Table 3.5. Swans were confirmed to be roosting at this site on a regular basis. Swans were also recorded flying between the Durrow Curragh and Ballycolla ca 3 km to the North.

Table 3.9: Summary of count data recorded at Durrow Curragh, Co Laois during the period March 2010 – April 2011.

	Mar 2010	Apr 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Black-headed Gull		2			1				
Cormorant				2	2				
Curlew				81					
Golden Plover	50			700					
Grey Heron	1								1
Kingfisher	1	1							
Lapwing				220					
Lesser Black-backed Gull		58							
Little Egret		1		1					
Mallard	3	2							1
Mute Swan	5	5		3					
Snipe	1								
Whooper Swan	120			81+	68	64	54	53	1

3.2.2.3 Ballycolla (Coolderry and River Guilly)

Counts were conducted at Ballycolla (Coolderry and River Guilly) on twelve occasions during the survey period March 2010 to April 2011. Whooper Swans were regularly recorded feeding on improved agricultural grassland at the Coolderry site with a peak count of 126 birds recorded on 18th March 2010 (see Table 3.10). The site was found to be used as both a feeding and roost site during the survey period. Birds were frequently recorded flying to and from grassland areas in the surroundings. Other water birds of conservation importance recorded at the site included Golden Plover, Lapwing, Curlew and Wigeon.

Dawn and Dusk Watches

Dates on which dawn and dusk watches were carried out at Ballycolla are presented in Table 3.5. Swans were observed roosting at this site during dawn and dusk watches. Swans were observed flying to the site from the direction of Durrow Curragh.

Table 3.10: Peak count data per month recorded at Ballycolla (Coolderry), Co Laois during the period March 2010 – April 2011.

	Mar 2010	Apr 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Curlew	8					6			
Golden Plover	250	17			c.50		29		130-150
Lapwing	5						84		4
Mallard	6								
Teal	32							6	6
Whooper Swan	126			34	9	25	55		
Wigeon	28								

3.2.2.4 River Nore – Foxburrow (Shanahoe Marsh)

Counts were conducted at Foxburrow (Shanahoe Marsh) on ten occasions during the study period. Whooper Swans were regularly recorded feeding and roosting at the site with a peak count of 20 birds recorded during April 2010 (see Table 3.11). Birds were frequently recorded flying to and from marsh areas in the surroundings. Other birds of conservation interest recorded at the site included Snipe, Lapwing, Curlew Cormorant and Mute Swan.

Dawn and Dusk Watches

Dates on which dawn and dusk watches were carried out at River Nore – Foxburrow (Shanahoe Marsh) are presented in Table 3.5. Whooper Swans were observed flying west-southwest of the feeding site during a dawn watch conducted in January 2011.

Table 3.11: Summary of count data recorded at Foxburrow (Shanahoe Marsh), Co Laois during the period March 2010 – April 2011.

	Mar 2010	Apr 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Cormorant					1			1	
Curlew						16	15		
Dipper					1				
Grey Heron						2	3	1	3
Jack Snipe			1						
Lapwing		1	100		25	152			24
Little Egret									1
Mallard		2				4		6	1
Moorhen						1			
Mute Swan							4		
Peregrine					1				
Snipe			1						4
Whooper Swan		20			16	4	18	6	

3.2.2.5 River Nore – Inchbeg

Counts were conducted at Inchbeg on ten occasions from March 2010 to April 2011. Few water birds were observed at this location throughout the study period (see Table 3.12). Those species that were most frequently recorded occurred in low numbers and are not deemed to be of high conservation concern.

Table 3.12: Summary of count data recorded at Inchbeg, Co Kilkenny during the period March 2010 – April 2011. Records from the River Nore between Ballyragget and Inchbeg are included.

	Mar 2010	Apr 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	April 2011
Coot		1							
Cormorant			3		1				
Grey Heron	1								
Lapwing					53				
Little Egret	2	1			1		2	1	
Mallard	2								

3.2.3 Counts at known water bird sites surrounding the study area

3.2.3.1 Grantstown Lough

Counts were conducted at Grantstown Lough on five occasions from March 2010 to April 2011. Few water birds were recorded at the lake throughout the survey period. Water birds of conservation interest recorded at the site included Cormorant, Mute Swan, Gadwall and Wigeon (see Table 3.13).

Table 3.13: Summary of count data recorded at Grantstown Lough, Co Laois during the periods March 2010 – April 2011.

	Mar 2010	Nov 2010	Jan 2011	Feb 2011	Apr 2011
Cormorant	>1		17	25	
Gadwall	>1		5		
Mallard	c.16	14	7		2
Moorhen				2	
Mute Swan	c.20		4	2	2
Wigeon	c.40	34	5		

3.2.3.2 River Barrow (Cloney)

All three sub-sites (Lotown; Dunrally Bridge and Vicarstown) of this main site were visited on six occasions from October 2010 to April 2011. A peak count of 15 Whooper Swans was recorded at the site on 28th January 2011 (see Table 3.14). Whooper Swans were observed feeding on open agricultural grassland during site visits.

Dawn and Dusk Watches

Dates on which dawn and dusk watches were carried out at River Barrow (Cloney) are presented in Table 3.5. Whooper Swans were observed flying North of Lotown feeding site along the River Barrow during a dusk watch in January 2011.

Table 3.14: Summary of count data recorded at River Barrow (Cloney), Co Kildare during the period October 2010 – April 2011.

	Oct 2010	Nov 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Cormorant						
Golden Plover					20	
Lapwing					42	
Mallard					4	
Moorhen					2	
Mute Swan					2	
Snipe			8			
Whooper Swan			15	6	6	

3.2.3.3 River Nore (Threecastles Bridge)

This site was visited on six occasions between October 2010 and April 2011. During February 2011 a peak count of 135 Lapwing and 120 Curlew was recorded. During other site visits the number of water birds utilizing the site was low (see Table 3.8).

Table 3.15: Summary of count data recorded at River Nore (Threecastles Bridge), Co Kilkenny during the period October 2010 – April 2011.

	Oct 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011
Coot				2	4	
Curlew				120		
Grey Heron			2		1	
Lapwing		8		135		
Little Egret		1			1	
Moorhen					2	
Mute Swan		2		2	6	
Wigeon				58	20	

4 DISCUSSION

The results of surveys carried out during March 2010 to April 2011 indicate that the eastern part of the study area is of low value to wintering waders and wildfowl. In general the topography and habitats have little potential to support wildfowl or waders.

Two areas within the central part of the study area were identified as being of potential value to waders and wildfowl. Firstly, the wide open valley of the Owenbeg River (a tributary of the River Nore) presents a feature in the landscape where wintering birds may direct their flight lines. Secondly, the lowlands adjacent to the Nore River between Tallyho Bridge and Ballyragget Bridge contain habitats that may occasionally be used by water birds during winter.

Results of the desktop study identified five discrete sites within the study area that have supported significant numbers of water birds in the past. However, recent data suggests that the importance of each of these sites has diminished somewhat in recent years, although due to insufficient data, it is not possible to confirm this for most sites.

During the current study, it has been shown that Avonmore Ponds, a site located approximately 1 km to the west of Ballyragget was regularly used by a small number of Whooper Swans (peak count of 20 Whooper Swans during March 2011). Observations of dawn and dusk flights indicate that these birds roost somewhere to the North-west, possibly at Durrow Curragh or Ballycolla. The flight line taken by these birds is a direct route from Avonmore ponds northwards towards Durrow.

The most significant numbers of water birds observed during the study were recorded at Durrow Curragh and Ballycolla (Coolderry), in the western part of the study area, where up to 128 Whooper Swans were recorded. For a site to be considered as nationally important for Whooper Swans it would need to regularly support in excess of 130 individuals (1% of the national population) (Boland and Crowe 2007). Based on observations of flight lines during the current study, it appears that this is a single population of Whooper Swans that alternate between the two sites. These sites are located in the far western part of the study area (see Figure 1.1).

The low numbers of water birds recorded throughout the study period may have been influenced by the relatively dry winters of 2009-2010 and 2010-2011. According to Met Eireann, Rainfall totals (including snowfall) for both seasons were below normal almost everywhere, with only around half of the seasonal totals recorded in some places. Therefore, lands that would typically flood (and

become attractive to larger numbers of water birds) during a normal winter remained relatively dry throughout most of the duration of the current study.

5 RECOMMENDATIONS

Based on the results of the current study, the most important water bird sites occur in the western part of the study area where significant concentrations of important wintering birds were recorded and have been reported in the past. It is recommended that the proposed powerline avoid this area so as to reduce any potential adverse impacts on sensitive bird populations.

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