

# **Study of the Breeding Birds of the Tolka River Valley Park in Fingal County**

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## **Table of Contents**

<b>Summary</b>	<b>1</b>
<b>1. Introduction</b>	<b>2</b>
<b>2. Description of Study Area</b>	<b>3</b>
<b>3. Survey Methodology</b>	<b>6</b>
<b>4. Results</b>	<b>7</b>
<b>5. Discussion</b>	<b>9</b>
<b>6. Birds of Conservation Concern</b>	<b>12</b>
<b>7. Recommendations</b>	<b>14</b>
<b>8. Conclusions</b>	<b>18</b>
<b>9. Acknowledgements</b>	<b>20</b>
<b>10. References and Bibliography</b>	<b>20</b>
<b>11. Appendices</b>	<b>21</b>
 <b>Appendix 1. Maps of eight study sections in the Tolka River Valley Park in May 2007</b>	
 <b>Appendix 2. Bird species recorded in the Tolka River Valley Park in May 2007</b>	

## **Summary**

An eight-kilometre stretch of the Tolka River, extending from near the County Meath border to Ashtown, is being developed by Fingal County Council as a public park.

While public amenity and recreation are major objectives of the park, it is recognised that the river valley is ecologically rich and diverse and that nature conservation should also be a high priority within the park.

To determine the breeding bird community of the park, a survey of breeding birds was carried out over two visits to each of eight sections of the park (developed and undeveloped) in early and late May 2007.

This report describes the habitats of the eight sections of the park, outlines the survey methodology, presents the results of the 2007 breeding bird survey, highlights the conservation status of a number of species recorded, and makes recommendations on the future management of the various sections of the park in order to maintain or enhance the breeding bird populations.

The breeding bird community of the Tolka River Valley Park was found to be very diverse (55 species), considering the somewhat limited range of habitats present within the park, and the fact that it is located inland and surrounded by urban/industrial development and intensively-managed farmland.

## **1. Introduction**

On 16<sup>th</sup> April 2007, Hans Visser, Biodiversity Officer with Fingal County Council, contacted the author of this report, enquiring about the possibility of carrying out a breeding bird survey along a c.8 km stretch of the Tolka River Valley between the County Meath border and Ashtown. The survey was to be carried out by means of two visits, in early and late May 2007, using appropriately modified survey/census methodology of the Countryside Bird Survey (BirdWatch Ireland). The author was available to carry out this survey, following a reconnaissance of the survey area with Hans Visser and Therese Casey of the Parks Division of Fingal County Council.

The purpose of the survey was to provide Fingal County Council with baseline information on the diversity of breeding birds, their distribution and relative abundance, to inform the further development of the Tolka River Valley Park. The information produced by the survey would also be useful for Fingal County Council's Biodiversity Action Plan.

## **2. Description of Study Area**

The Tolka River Valley Park lies along the upper Tolka River in south-west Fingal County, close to the urbanised/industrial areas of Damastown, Mulhuddart, Corduff, Blanchardstown, Castleknock and Ashtown. The N3 Dublin-Cavan dual carriageway runs northwest close to the south side of the park, while the M50 motorway crosses the Park between Abbotstown and Dunsink. The Park extends 8 km from near the County Meath border at Damastown to Ashtown. The approximate centre point of the park is at Irish National Grid reference O 080.390.

Through the park the Tolka River descends gently from about 50m to about 35 m above sea level. In the Mulhuddart-Corduff stretch (Sections 3 and 4) there is considerable meandering in the river's course, while at Abbotstown there are some small weirs and natural rapids where the river traverses rocky sills. Apart from the urbanised/industrial areas mentioned above, the river flows through fertile lowland agricultural land (mainly pasture), with some woodland. The river valley is essentially a narrow flood plain.

For the purposes of this study (and for park management reasons) the 8 km stretch of the Tolka River Valley was divided into eight sections, numbered 1-8 from north-west to south-east. Conveniently, these eight sections are delimited by bridges at more-or-less regular intervals of about 1 km. The following is a brief description of each section.

### **Section 1.** Damastown-Huntstown-Parslickstown. c.1.3 km, O 053.410

In this section the Tolka River meanders gently through a rectangle defined by the N3 dual carriageway and three minor roads. There are industrial complexes in the south-east and north-west of the section: otherwise the habitat is predominantly grassland (with much hogweed and stinging nettle in places), with remnants of some field boundary hedgerows. The Tolka River has been improved for fish by creation of gravel banks for spawning and placement of large rocks to vary water flow. Emergent aquatic vegetation was evident in places, especially during the late May visit. Some planting of trees (mainly native) has been carried out on the southern edge of the section. A small proportion of the area has willows, alders, ashes, hawthorns, poplars, elders, birches and conifers.

### **Section 2.** Parslickstown Bridge-Mulhuddart Bridge. c.1.0 km, O 062.407

This section is also rectangular, with the N3 dual carriageway and a minor road along the south side. Part of the old village of Mulhuddart lies between these two roads. Along the north side of the river there is an extensive area of playing fields, and an area of rough dry grassland. New building development is taking place at the eastern end of the section.

## **3.**

The Tolka River meanders gently through its flood plain, which has much marshy vegetation. Individual trees and small stands of willows, ashes, poplars, hawthorns, elders, chestnuts, sycamores, hazels and blackthorns occupy a small proportion of the section. There is evidence of a recently-laid sewage pipeline through gravelly ground on the south side of the section.

**Section 3.** Mulhuddart Bridge-Corduff/Blanchardstown Road Bridge (Castlecurragh Park). c.0.8 km, O 070.402

This section is sandwiched between areas of new housing estates in Mulhuddart and Corduff. It is fenced with high galvanized iron railings, with gates locked at night. Within the park there is a well-maintained hard-topped pathway, mainly along the southern side, with three footbridges over the Tolka River, and an elevated metal-grid walkway through a marshy area in the middle. On the sloping bank at the north side of the southern half of the section is an area of mature deciduous woodland., while elsewhere there are individual trees and small clusters of willows, ashes, hawthorns, sycamores, alders, birches, elders and buddleja. In the north-western half the Tolka River meanders acutely through its marshy floodplain, while its course is straighter in the south-eastern half. Small areas of gravelly high ground on the south side have a dry grassland flora including cowslips and orchid species. Narrow strips of grassland along the paths are mowed, but otherwise the vegetation is allowed to grow naturally.

**Section 4.** Corduff/Blanchardstown Road Bridge-Snugborough Road Bridge. c.0.9 km, O 075.395

This section is also sandwiched between new housing estates and the Blanchardstown Town Centre across the N3 dual carriageway to the south. The Tolka River meanders acutely through this section. There are footpaths along both the north and south sides, with a number of linking paths crossing the flood plain. Over 50% of the area has mature trees (sycamores, hazels, willows, birches, poplars, elders, with blackthorn scrub and much understorey of brambles), with open areas of mowed grassland in clearings. In the northern part a pathway traverses quite an extensive marshy area

**Section 5.** Snugborough Road Bridge-Mill Road Bridge. c.0.7 km, O 080.389

The N3 dual carriageway and associated slipways traverse this section, with about half of the Tolka River meandering through the south side of the main road. Most of the section north of the main road is high, dry grassland, with a broad band of mature deciduous trees at the northern edge, and a large area of blackthorn scrub in the middle. At the north-west

and south-east ends of this northern part are areas of flood plain woodland. This northern part of the park has a network of well-maintained hard-topped paths, with mowed grass at the edges. Otherwise the grass and other vegetation are allowed to grow naturally. South of the main road most of the terrain is marshy flood plain, with individual trees and small stands of trees and scrub. This area has no paths and is more difficult to access.

**Section 6.** Mill Road Bridge-M50 bridge. c.0.9 km, O 087.385

Blanchardstown village and the N3 dual carriageway lie to the south of this section, the M50 motorway passes the east end, while the James Connolly Memorial Hospital complex occupies much of the north-western side. Pasture, parkland and some woodland lie between the hospital complex and the M50 motorway. Almost the entire section itself is mature woodland – mainly deciduous, but with a fine stand of old yew, and some conifers at the east end. The dominant trees in this section are chestnuts, redwoods, poplars, Scots pines, ashes, spruces, beeches, limes, willows, oaks, hawthorns, and elders. The woodland is mostly dense, with a rather poor understorey, with snowberry in places. Fingal County Council has recently cleared much invasive cherry laurel from the woodland. The Tolka River banks are steep in places, and there are rock shelf outcrops in places. The river forms small rapids over some of these, and there are also some old man-made weirs on the river.

**Section 7.** M50 bridge-old bridge near Ashtown Lodge. c.0.9 km, O 095.383

This section is bordered on the north by the Elmgreen Municipal golf course, on the south by the River Road, on the west by the M50 motorway (and Dunsink Lane), and on the east by a disused and overgrown lane and bridge near Ashtown Lodge. The river valley is quite narrow here, with mature deciduous trees on the north and south sides, and small stands of mature trees in the flood plain – especially in the middle and eastern parts. The Tolka River meanders gently through the section, and there is an old artificial pond, with a wooded island, in the eastern half. The remainder of the flood plain is dominated by natural grassland. The pond appears to be eutrophic and has a rich growth of submergent and emergent aquatic plants. A narrow informal footpath runs the length of the section on the north side of the river: on the late May visit a tractor with mow-bar was cutting a swathe of grass along this path to improve access.

**Section 8.** Old bridge near Ashtown Lodge-Ashtown Road Bridge. c.1.0 km, O 105.377

The footpath traversing the previous section continues through this section, but had not been mowed, and is difficult to negotiate in a couple of places. To the north of this section are a continuation of the golf course, large pasture fields, and the National Food

Centre, while to the south is some farmland (mainly pasture) and the River Road. This section is rather narrow and there is dense woodland along the river approaching Ashtown Bridge. The woodland is dominated by willows, sycamores, ashes, hawthorns, with holly, ivy and brambles. Elsewhere within the section are areas of dry and wet grassland. A couple of wildlife sanctuary notices have been erected here.

### **3. Survey Methodology**

The eight survey areas/sections into which the Tolka River Valley Park is divided (Appendix 1) were each visited twice in May 2007, on the 5<sup>th</sup> May (Sections 4-8), 6<sup>th</sup> May (Sections 1-3), 29<sup>th</sup> May (Sections 1-4), and 30<sup>th</sup> May (Sections 5-8). The purpose of two visits, with a spacing of about three weeks, was to locate the resident breeding species and early summer migrants during the early visit, and these and late summer migrants during the late visit.

The surveys were carried out from early to mid-morning (06.25-11.10 hrs), on days when the weather was fair – mainly dry, mild and with winds between calm and light. The timing and weather conditions are recommended for maximum detection of birds by visual sightings, song and calls (Anon. undated, Bibby *et al.* 1992).

Each of the eight sections is quite narrow, generally following the flood plain of the Tolka River and encompassing valley sides. By walking slowly along the course of the river, mainly on formal and informal footpaths, it was possible to detect birds visually and by songs and calls. Where additional footpaths existed, these were also walked, either on the first passage through the section concerned or on the return walk. Some of the sections were wider than average and it was deemed desirable to extend the linear transect to ensure that these wider parts were fully covered. The walking survey was interrupted at regular intervals by pauses of several minutes, to ensure maximum detection of birds.

Visual detection and identification of birds was aided by use of binoculars (8 x 42 mm).

The approximate positions of all birds found (visually and by song/call) were plotted at the time on large-scale maps on a clip-board.



## 4. Results

During the May 2007 field survey visits to the eight study areas of the Tolka River Valley Park, a total of 55 bird species were encountered. Details of the numbers of each species found in each section on each of the two visits are given in Appendix 2, Tables 1-8. Here, the breeding status of these 55 species in the study area is given.

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Species	Breeding proved or probable	Breeding possible	Not breeding, present
Grey Heron			+
Mute Swan			+
Mallard	+		
Tufted Duck		+	
Sparrowhawk	+		
Kestrel	+		
Pheasant	+		
Moorhen	+		
Coot	+		
Lesser Black-backed Gull			+
Rock Dove	+		
Stock Dove	+		
Woodpigeon	+		
Collared Dove	+		
Swift			+
Sand Martin			+
Swallow	+		
House Martin	+		
Meadow Pipit	+		
Grey Wagtail	+		
Pied Wagtail	+		
Dipper	+		
Wren	+		
Dunnock	+		
Robin	+		
Stonechat	+		
Blackbird	+		
Song Thrush	+		
Mistle Thrush	+		

Sedge Warbler	+	
Whitethroat	+	
Blackcap	+	
Chiffchaff	+	
Willow Warbler	+	
Goldcrest	+	
Spotted Flycatcher	+	
Long-tailed Tit	+	
Coal Tit	+	
Blue Tit	+	
Great Tit	+	
Treecreeper	+	
Magpie	+	
Jackdaw	+	
Rook	+	
Hooded Crow	+	
Starling	+	
House Sparrow	+	
Chaffinch	+	
Greenfinch	+	
Goldfinch	+	
Linnet	+	
Redpoll	+	+
Bullfinch	+	
Yellowhammer		+
Reed Bunting	+	

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## 5. Discussion

### General discussion on the breeding bird community of the 2007 study area.

The breeding birds community of the Tolka River Valley Park is very diverse, especially when one considers the limited range of habitats available, the relatively small area and linear nature of the park, the extent of urban/industrial development adjacent to the park, and of intensively-managed farmland (and playing fields and a golf course) nearby.

Not all of the 55 species recorded (see above and Tables 1-8) are believed to be nesting within the park. Several were simply flying low over the park or feeding there. The non-breeders were Grey Heron, Mute Swan, Lesser Black-backed Gull, Swift and Sand Martin. Kingfisher was not recorded during the May 2007 survey, but the species is reliably reported as occurring from time to time, but not breeding.

The remaining species – the core breeding bird community – were proved to be breeding in the park, or were considered to be probably breeding or possibly breeding, based on standard criteria used for breeding birds atlas surveys (Sharrock 1976, Gibbons *et al.* 1993).

The presence of the Tolka River, running the entire length of the park, and the pond in Section 7, is the reason that Mallard, Tufted Duck, Moorhen, Coot, Grey Wagtail and Dipper were found in the 2007 survey. The presence of water, together with the non-use of pesticides and herbicides, has resulted in an abundance of aerial insects, on which Swifts, Sand Martins, Swallows and House Martins feed. The remaining species benefit, for nesting and feeding, from the mixture of woodland, trees, shrubs, hedgerows, scrub, wet and dry grassland, etc. Sparrowhawks have an abundant source of food in the abundant passerine community and Woodpigeons, while Kestrels feed on large insects, small mammals and small birds in the more open areas of the park.

The 2007 survey methodology was semi-quantitative, so it is not possible to convert numbers of birds seen/heard into breeding pairs per ha or square kilometre. In order to achieve this, for example to compare the bird community in the study area with quantitative studies in similar areas elsewhere, it would have been necessary to carry out a much more intensive study. This was beyond the scope of the present study's terms of reference.

Notable species recorded during the 2007 survey included the following:

A pair of **Tufted Ducks** on the pond in Section 7, which were thought to be possibly breeding.

**Grey Wagtails** were closely associated with the Tolka River, especially the fast-running sections, and were nesting at the old stone bridges.

A pair of **Dippers** was found on the river in Section 6, where there are small cascades over rocky shelves and old man-made weirs. This species is associated more with unpolluted and fast flowing upland rivers and streams.

Territory-holding singing male **Blackcaps** were recorded at close intervals in areas of woodland and stands of mature trees throughout the study area. Until recent decades this species was a scarce and localised breeding species in Ireland.

**Treecreepers** were recorded in the mature woodlands in Section 6, where soft-barked mature redwoods provide sheltered winter night-roosting niches.

### **The 2007 breeding birds survey in the context of previous breeding birds surveys in the area.**

The eight sections of the Tolka River Valley Park lie within the Irish National Grid 10-km squares O 03 (Sections 4-7), O 04 (Sections 1-3), and O 13 (Section 8). These three 10-km squares were surveyed for breeding birds in 1968-72 and 1988-91 as part of the breeding birds atlas surveys of Britain and Ireland (Sharrock 1976, Gibbons *et al.* 1993). During those surveys, a total of 71 birds were recorded in the three squares, 61 of them proved to be breeding or probably breeding, and 10 possibly breeding. This compares with the 55 bird species found in the May 2007 survey in the Tolka River Valley Park. The additional species found in 1968-72 and 1988-91 were Little Grebe, Great Crested Grebe, Grey Partridge, Corncrake, Dunlin, Curlew, Redshank, Common Sandpiper, Herring Gull, Great Black-backed Gull, Black Guillemot, Barn Owl, Long-eared Owl, Skylark, Raven and Tree Sparrow.

Some of the species found in the previous surveys but not during the present survey are birds with specialist habitat requirements whose habitats are absent from the 2007 study area. These are Great Crested Grebe, Dunlin, Curlew, Redshank, Common Sandpiper, Herring Gull, Great Black-backed Gull and Black Guillemot. Others (Grey Partridge and Corncrake) which may have been present in the 2007 study area in the past have declined in numbers and range and this may be the reason for their absence now. Two species

(Barn Owl and Long-eared Owl) are nocturnal and may have been overlooked during the present survey because the fieldwork was carried out during morning daylight. It is also possible that some species were present in May 2007 but were simply not detected.

Five species not found in 2007, but which could be expected because suitable habitat exists in the study area and because they were recorded in the past breeding in the surrounding 10-km squares, are Little Grebe (the pond in Section 7 is ideal), Skylark (the grassland in several sections appears very suitable for this species), Jay (present in woodland further down the Tolka River), Raven (possible as the species is increasing as a tree-nester), and Tree Sparrow (possible as the species, though still localised, currently appears to be increasing and spreading in the Fingal area).

On the other hand, two species which were not found in the three 10-km squares in the 1968-72 and 1988-91 atlas surveys were recorded in May 2007. These were Lesser Black-backed Gull and Redpoll. The former was recorded simply flying over the park and is very unlikely to be breeding there. The latter is known to have expanded its breeding range since the breeding atlas surveys and is probably now breeding in the park.

## 6. Birds of Conservation Concern

### European Union Birds Directive

The European Union has produced a Directive on the Conservation of Wild Birds (Directive 79/409/EEC) which gives protection to all wild birds occurring in the European Union. Specified game birds may be hunted during an open season, while certain species (e.g. serious agricultural pests) may be controlled by Member States using a derogation process. Those species which are of special conservation concern within the European Union are listed in Annex I of the Directive, and Member States have an obligation to put in place special measures for these species. The establishment of Special Protection Areas for Annex I bird species is the main special measure used.

No Annex I bird species were found in the Tolka River Valley Park during the May 2007 field survey visits. However, the author of this report has received information that Kingfishers *Alcedo atthis* have been seen occasionally on stretches of the Tolka River within the study area. This species is included in Annex I. In order to maintain a population of Kingfishers on the river it is necessary that a high water quality be maintained so that the small fish on which Kingfishers feed can survive. During the May 2007 field survey Kingfisher nesting holes were looked for in the river banks, but none was found. There may be scope for the creation of artificial nesting holes in suitable river banks within the park to attract this species.

### Red List of Birds of Conservation Concern in Ireland

At national level there is a system for grading the conservation status of Irish birds, named the *Birds of Conservation Concern in Ireland* system (Newton *et al.* 1999). Those species which are included in the *Red List* are of greatest conservation concern in Ireland, usually because they have suffered a greater than 50% decline in their breeding populations or ranges over twenty-five years. Those in the *Amber List* are of medium conservation concern, usually because they have suffered a moderate decline (20-49%) in their breeding populations or ranges over the last twenty-five years. The populations and ranges of the remaining species are considered to be in a favourable state and therefore these species are included in the *Green List*.

At present, eighteen Irish bird species are included in the *Red List*, but only one of the 55 species recorded in the Tolka River Valley Park during the May 2007 survey is among these. A pair of **Yellowhammers** was recorded in Section 1, on the first visit only, so

breeding was merely possible. This species is on the *Red List* because it has suffered a decline of >50% in its breeding population and range in Northern Ireland, and a moderate decline (20-49%) in the Republic of Ireland in the last 25 years.

The presence of one pair on one occasion, possibly breeding in the study area, is not considered significant from a bird conservation point of view.

### **Amber List of Birds of Conservation Concern in Ireland**

Currently, seventy-seven Irish bird species are included in the *Amber List*, of which nine were recorded in the Tolka River Valley. These are as follows:

**Tufted Duck:** 1 pair on pond in Section 7 on 2<sup>nd</sup> visit, possibly breeding. On *Amber List* because >50% of its non-breeding population is concentrated in ten or fewer sites.

**Coot:** 1 pair on pond in Section 7 on both visits, breeding. On *Amber List* because >50% of its non-breeding population is concentrated in ten or fewer sites, and because of a moderate decline (20-49%) in its breeding range in last 25 years.

**Stock Dove:** 1 pair in Section 1 on 2<sup>nd</sup> visit, probably breeding. On *Amber List* because of a moderate decline (20-49%) in its breeding population in last 25 years.

**Kingfisher:** (not recorded during 2007 survey, but reliably reported as present in area). On *Amber List* because of its unfavourable conservation status in Europe, and because of a moderate decline (20-49%) in its breeding range in last 25 years. Also in Annex 1 of the EU Birds Directive (see above).

**Sand Martin:** 1 in Section 2 on 1<sup>st</sup> visit, not breeding. On *Amber List* because of its unfavourable conservation status in Europe.

**Swallow:** 1-5 in all Sections on both visits to five Sections and on 2<sup>nd</sup> visits to three Sections, breeding. On *Amber List* because of its unfavourable conservation status in Europe.

**Stonechat:** 1 pair in each of Sections 1, 3 and 5, breeding. On *Amber List* because of its unfavourable conservation status in Europe.

**Spotted Flycatcher:** 1 bird in Section 8, probably breeding. On *Amber List* because of its unfavourable conservation status in Europe, and because of a moderate decline (20-49%) in its breeding population in last 25 years.

**Redpoll:** 1 in Sections 2 on 2<sup>nd</sup> visit, possibly breeding. On *Amber List* because of a moderate decline (20-49%) in its breeding range in last 25 years.

## 7. Recommendations

In order to maintain and enhance the breeding bird population and community of the eight sections of the Tolka River Valley Park, the following measures are recommended.

Those sections (Sections 3, 4 and 5) which have already been developed by Fingal County Council as public parks (with sealed paths, mowed grass areas, car parking space, bridges, park benches, perimeter fencing, gates, etc) provide excellent recreational facilities for the people of the adjacent urban areas of Mulhuddart, Corduff, Whitestown and Blanchardstown. Although developed in this way, the sections embody much diverse and natural habitat which is attractive to birds, and the surveys in May 2007 demonstrated that quite a high density and diversity of birds breed and feed in these sections. Therefore it is **recommended** that little change to the current management be instituted.

However, a number of measures can be done to enhance the bird community in these areas, and the following are **recommended**.

A shortage on natural holes and cavities for hole-nesting birds was noted, and it would be helpful to provide nest boxes for such species as tits (Blue, Great and Coal Tits), House Sparrows, Starlings, and Robins. Suitable platforms and ledges can be fitted under the bridges to provide more nesting opportunities for Swallows, Dippers and Grey Wagtails. Such nest boxes and devices require annual maintenance, and the employment of Park Rangers in this part of the Tolka River Valley Park will enable this to be done.

Kingfishers, though not seen during the May 2007 survey, are reliably reported to be present in this part of the park. The Tolka appears to be relatively unpolluted and has many small fish and therefore is ideal habitat for this EU Birds Directive Annex 1 and



*Amber List* species. However, a lack of high, vertical river banks in which Kingfishers can excavate nesting holes may be a constraint at present, so it is **recommended** that the excavation of a couple of suitable banks in quiet parts of the river course be considered.

Much of the open grassland in these sections has been left unmowed, unfertilised and unsprayed (with biocides) for some time, and should be left so. Such grasslands are rich in seed-bearing plants, wild flowers, and a diverse sub-soil invertebrate community. These provide many birds with animal and plant food, directly and indirectly. However, where natural fertility and soil-moisture levels promote very dense long grassland vegetation over large areas, it is **recommended** that some mowing be carried out during the peak growing season in order to make the food resource accessible to certain ground-feeding bird species such as Dunnocks, Robins, Blackbirds, thrushes and crows.

**Recommendations** regarding the five less developed or undeveloped sections of the Tolka River Valley Park (Sections 1, 2, 6, 7 and 8) are dealt with on an individual basis, as follows:

**Section 1:** This section is relatively narrow, being hemmed in by industrial parks on the south-east and north-west sides, and by the N3 dual carriageway and minor roads. It is largely grassland, with some old hedgerows in the western half. Some tree planting has been done fairly recently on the boundary berm at the Parslickstown industrial estate, and along the N3 and the minor road at the west end. It is recommended that this section be retained largely in its present state, primarily as an example of “unimproved” riverine damp grassland. Birds of open grassland, such as Skylarks, Meadow Pipits and Stonechats, require this type of habitat. It is recognised that to function as a public park it will probably be necessary to run a pathway east-west through this section, and it is **recommended** that such a path runs along the river bank only in places, so that aquatic bird species have stretches of the river where they can nest and feed undisturbed.

**Section 2:** The Tolka River valley itself is relatively narrow as it winds gently through this section. There is a large area of playing fields occupying the north-western quarter of the area, which are included in the park, while to the east of these lies an area of “waste ground” which is also within the park. There is some construction work going on in the south-east corner by the old village of Mulhuddart, and evidence of a large-bore sewage pipe recently laid along much of the south edge: otherwise the valley is largely unspoilt. It is **recommended** that the valley floor (the flood-plain) be left as it is at present. The presence of high-density housing nearby leaves the area open to disturbance and recreational pressure, so most of this can be diverted away from the flood plain by

providing pathways through the park on the higher ground above the flood plain, perhaps with one or two linking paths and bridges over the river. These linking paths should avoid marshy areas, or take the form of raised boardwalks across such areas. The “waste ground” to the east of the playing fields appears to be largely unimproved dry grassland on poor, gravelly soils, and may be of general ecological interest: at present it is a valuable area for breeding Meadow Pipits and ground-feeding birds. It should be kept as it is, although a pathway through/around it would not result in significant damage or disturbance.

**Section 6:** This section is largely mature mixed woodland, a habitat which is very limited in the other sections of the Tolka River Valley Park. For this reason it is **recommended** that it be retained. It is also **recommended** that long-term woodland management here should favour the planting of a mixture of native tree species to replace fallen non-native trees. The excellent work that has already been done to clear invasive cherry laurel should continue as appropriate, in order to allow the development of a well-structured understorey of benefit to wildlife. The existing pathway through this section would benefit from a small amount of upgrading, for safety and to encourage most users to remain on the track. Where the path crosses a rock outcrop it is slippery in wet conditions and potentially dangerous. Any repair/maintenance work carried out on the old stone bridge across the river should ensure that nesting Dippers and Grey Wagtails, and roosting bats, are not disturbed or displaced. There may be scope for enhancement of nesting and roosting sites for these.

**Section 7:** This section has an elevated golf course extending along the northern boundary, with a wooded slope falling into the flood plain. A minor road forms the southern boundary. There is a small car park and a gate at the western end of the section. The eastern boundary of the section is an overgrown and disused track between high stone walls, with very narrow gaps allowing access to the river valley to the west and east. The section is relatively narrow, and there is a narrow footpath running through it to the north of the river. This path is reasonably clear in places, but becomes overgrown in summer and difficult to follow. During the second visit in May 2007 a tractor and mow-bar had cut a swathe through the long grass on the line of the footpath, which greatly assisted passage on foot. It is **recommended** that this existing path line be followed by a future upgrade. Currently, one small section of the pathway is blocked by a fallen tree, and there is also a very muddy/marshy area where a stream flows in from the northern slope. The path here needs to be improved by removing the tree and installing an elevated boardwalk over the soft ground. Such improvements to the pathway will not have any detrimental impacts on the habitats, flora and fauna of this section. A major feature of this section is the existence of medium-sized pond (about 200 m long) with a wooded

island, on the north side of the river. This is rich with submergent and emergent aquatic vegetation, and it is the only habitat of this type in the Tolka River Valley Park.

Moorhens and Coots, and possibly Tufted Ducks and Mallard, breed at this pond, while Grey Herons also feed there. The pond is surrounded by trees and bushes and is largely screened from the footpath by these. Care should be taken that footpath upgrading does not result in disturbance to the waterbirds at the pond.

**Section 8:** This section of the Tolka River Valley Park is the least accessible at present. At the western end it is reached from an overgrown track by an extremely narrow gap in an old stone wall, while access from the eastern end, close to Ashtown, is by climbing a wall at the edge of a minor road. The southern boundary is formed by River Road, while the northern boundary adjoins lands owned by the National Food Centre. This northern boundary is unclear in places and livestock can wander into the flood plain. The section is not entirely owned by Fingal County Council, with private lands at Ashbrook breaking the section into two parts. It is **recommended** that a narrow strip of land on the north side of the river, between Ashbrook and the National Food Centre be acquired by the Council to establish continuity and a public right of way for the park, and also that the northern boundary be defined with a stock-proof fence. A small derelict building (sometimes used for “cider parties”) and associated fencing should be demolished/removed. There is a poorly-defined pathway through this section, which can be upgraded without any significant adverse impact on the habitats, fauna and flora. It is **recommended** that the remainder of the section be left as it is at present.

A number of **recommendations** that apply to all sections of the park are:

-- artificial fertilisers, pesticides and herbicides should not be used in the park unless deemed absolutely necessary in certain cases.

-- any necessary pruning or trimming of trees, bushes and hedges should be done in winter, to avoid destroying birds’ nests.

-- any mowing that is necessary should be mindful of the possibility of ground-nesting birds (e.g. Pheasants, Skylarks, Meadow Pipits), and in some cases should be deferred until wild flowers have shed ripe seeds.

-- burning of vegetation should be avoided.

-- any new planting of trees and shrubs should use a variety of native species, particularly those which already occur naturally in the Tolka River Valley, with emphasis on berry-bearing species and those that provide winter shelter and nesting cover.

-- signage and interpretative boards, informing the public about the ecology, diverse habitats, fauna, flora, and wildlife conservation should be erected in appropriate places. Requests for people to stay on the paths, avoid lighting fires, keep dogs under control, etc. should be worded diplomatically.

-- leaflets, booklets and other educational and informational material about the wildlife of the Tolka River Valley Park should also be provided to park users, and perhaps to schools in the area.

## 8. Conclusions

The two surveys of breeding birds carried out in early and late May 2007 produced a total of 55 bird species in the eight sections of the Tolka River Valley Park. This is a high diversity of species for an inland site with the range of habitats found in the park.

Based on established criteria for assessing the breeding status of birds (Gibbons *et al.* 1993) it is believed that the great majority of these (46 – 84%) were breeding or probably breeding in the park, while the remainder (mainly non-passerines) were probably not breeding, but were using the park as a feeding area.

Most of the bird species which have been recorded in the Irish National Grid 10-km squares in which the park lies, and for which suitable nesting habitat exists in the park, were found in the May 2007 survey. Nocturnal and crepuscular species such as owls were not recorded because the survey was carried out in daylight. Corncrakes and Grey Partridges were present in the area several decades ago but are now regionally extinct.

No attempt was made to establish the wintering/non-breeding bird community of the park as this was not part of the brief for the current study.

One bird species of high conservation importance, the Kingfisher, was not seen during the May 2007 survey, but was reliably reported by Park Rangers as occasionally present. This species is listed in **Annex 1** of the European Union Birds Directive as a species of European conservation concern, and is also included in the **Amber List** (medium concern) of Birds of Conservation Concern in Ireland.

One bird species, the Yellowhammer, was recorded on one visit in one section, and was noted as a possible breeder. This species is on the **Red List** (high concern) of Birds of Conservation Concern in Ireland.

Nine bird species recorded in the park are on the **Amber List** (medium concern) of Birds of Conservation Concern in Ireland. Coot, Swallow and Stonechat were proved to be breeding in the park; Stock Dove, and Spotted Flycatcher were probably breeding; Tufted Duck and Redpoll were possibly breeding; Kingfisher (see above) and Sand Martin were present but thought not to be breeding.

A number of other bird species, which are not listed as species of European or Irish conservation concern were of some interest. These included the following:

**Dipper:** usually found on fast-flowing unpolluted waters in upland areas, its presence on the Tolka River around the weirs and rock shelves in Section 6 probably indicates good water quality.

**Sedge Warbler:** generally confined to lowland reedbeds, marshes and overgrown wetlands, it was somewhat unexpected to find this species in a relatively small area surrounded by urbanisation, industrialisation, and intensively-farmed lands.

**Blackcap:** this species was a scarce and localised breeding summer migrant in Ireland until relatively recently. Territory-holding singing males were at unusually high density in most areas of the park.

**Treecreeper:** very suitable habitat for this species if found in Section 6, and it was noted that Treecreepers have been using soft-barked redwood trees as winter night roosts.

It was noted that three sections of the Tolka River Valley Park have already been sensitively developed as public parkland, with more emphasis on naturalness than on a traditional “manicured” and formal style of park management. This approach is more beneficial to birds and wildlife generally, and yet provides the public with excellent recreational amenities.

It is **recommended** that the remaining five sections of the park be allowed to retain their naturalness, generally maintaining the status quo, but developing pathways to encourage visitors to impact minimally on the natural habitats, fauna and flora.

## 9. Acknowledgements

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## 11. Appendices

### Appendix 1. Maps of eight study sections in the Tolka River Valley Park in May 2007.

[Maps to be inserted by Hans Visser – maybe colour aerial photographs as well?]

### Appendix 2. Bird species recorded in the Tolka River Valley Park in May 2007.

1. Grey Heron	<i>Ardea cinerea</i>
2. Mute Swan	<i>Cygnus olor</i>
3. Mallard	<i>Anas platyrhynchos</i>
4. Tufted Duck	<i>Aythya fuligula</i>
5. Sparrowhawk	<i>Accipiter nisus</i>
6. Kestrel	<i>Falco tinnunculus</i>
7. Pheasant	<i>Phasianus colchicus</i>
8. Moorhen	<i>Gallinula chloropus</i>
9. Coot	<i>Fulica atra</i>
10. Lesser Black-backed Gull	<i>Larus fuscus</i>
11. Feral Pigeon/Rock Dove	<i>Columba livia</i>
12. Stock Dove	<i>Columba oenas</i>
13. Woodpigeon	<i>Columba palumbus</i>
14. Collared Dove	<i>Streptopelia decaocto</i>
15. Swift	<i>Apus apus</i>
16. Sand Martin	<i>Riparia riparia</i>
17. Swallow	<i>Hirundo rustica</i>
18. House Martin	<i>Delichon urbica</i>
19. Meadow Pipit	<i>Anthus pratensis</i>
20. Grey Wagtail	<i>Motacilla cinerea</i>
21. Pied Wagtail	<i>Motacilla alba</i>
22. Dipper	<i>Cinclus cinclus</i>
23. Wren	<i>Troglodytes troglodytes</i>
24. Dunnock	<i>Prunella modularis</i>
25. Robin	<i>Erithacus rubecula</i>
26. Stonechat	<i>Saxicola torquata</i>
27. Blackbird	<i>Turdus merula</i>
28. Song Thrush	<i>Turdus philomelos</i>
29. Mistle Thrush	<i>Turdus viscivorus</i>

30. Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
31. Whitethroat	<i>Sylvia communis</i>
32. Blackcap	<i>Sylvia atricapilla</i>
33. Chiffchaff	<i>Phylloscopus collybita</i>
34. Willow Warbler	<i>Phylloscopus trochilus</i>
35. Goldcrest	<i>Regulus regulus</i>
36. Spotted Flycatcher	<i>Muscicapa striata</i>
37. Long-tailed Tit	<i>Aegithalos caudatus</i>
38. Coat Tit	<i>Parus ater</i>
39. Blue Tit	<i>Parus caeruleus</i>
40. Great Tit	<i>Parus major</i>
41. Treecreeper	<i>Certhia familiaris</i>
42. Magpie	<i>Pica pica</i>
43. Jackdaw	<i>Corvus monedula</i>
44. Rook	<i>Corvus frugilegus</i>
45. Hooded Crow	<i>Corvus cornix</i>
46. Starling	<i>Sturnus vulgaris</i>
47. House Sparrow	<i>Passer domesticus</i>
48. Chaffinch	<i>Fringilla coelebs</i>
49. Greenfinch	<i>Carduelis chloris</i>
50. Goldfinch	<i>Carduelis carduelis</i>
51. Linnet	<i>Carduelis cannabina</i>
52. Redpoll	<i>Carduelis flammea</i>
53. Bullfinch	<i>Pyrrhula pyrrhula</i>
54. Yellowhammer	<i>Emberiza citronella</i>
55. Reed Bunting	<i>Emberiza schoeniclus</i>