



Monaghan Town Habitat Survey

For: Monaghan Tidy Towns Association

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1. Introduction

1.1 About this Survey

This survey was commissioned by Monaghan Tidy Towns Association and was carried out by Flynn, Furney Environmental Consultants. The purpose of the survey was to classify and describe the habitats in and around the town of Monaghan. The primary objective of the survey was to assess the value of the town in terms of biodiversity and to produce recommendations for management of these. A further objective was to propose projects and other environmental initiatives that would be of long-term benefit to local habitats and species as well as fulfilling the criteria of the Tidy Towns Competition. The survey was carried out between June and August 2010.

1.2 Scope of Area under Survey

The area eligible for assessment within the Tidy Towns Competition is generally accepted as that area within the [50 Kph] speed limitation signs. This was used to guide the extent of the area under survey in this present study. However, as habitats may well extend beyond this area from within the speed limited area or may occur outside the area but be of relevance to those habitats found within it, the surveyor briefly surveyed those accessible areas (via public roads) adjacent to or beyond the speed limit signs. Some private grounds such as St. Macartan's College were inaccessible at time of survey.

1.3 Monaghan Town- a Brief Overview

The town of Monaghan is found at 54.247926 N and 6.970825 W, IGR H 668 338. It is the principal town of the county and has a population of just under 8,000 people at the 2006 census. The town nestles among drumlins which define the landscape in the hinterlands of the town and for much of the county.

The town is located on two national roads (N2 and N54) and was also formerly linked to other towns by railway and canal. This canal and a small river are two of the corridor habitats still extant within the town. A much larger river, the Ulster Blackwater, flows in a rough west-east direction through the hinterlands to the north of the town.

The town centre is defined by four squares interconnected by streets. There are relatively few green areas within the town centre, exceptions being Peter's Lake and the Ulster Canal Park. The town is surrounded by agricultural lands and there are a number of small lakes within and on the edge of the town's boundary. There are several churches on the edge of the town and a cathedral to the west of the town. Some smaller habitat areas which form wildlife corridors such as roadways and a section of old railway are also found. The town is partially by-

passed by a recently completed section of the N2 to the north and west of the town.

2. Methodology

2.1 How this Survey was Carried Out

The survey involved both desk and field study. The desk study was carried out by examination of contemporary Ordnance Survey mapping, as well as those of 1843 and 1913. Aerial photography was also studied. A consultation was carried out with Monaghan's Heritage Officer on 1 June and a site visit to some of the sites on 21 June.

The survey was carried out between June and August 2010 and established baseline ecological conditions within the constraints of the time of year. Habitats were identified, mapped and classified and dominant plant species noted were conducted according to the guidelines given by the JNCC (2007) and the Heritage Council (2010).

Signs of mammals and birds seen were recorded as part of these surveys. Any species observed were noted and recorded. Habitat classification followed Fossitt (2000) to Level III and the floral nomenclature used follows Webb, Parnell and Doogue (1996) and Scannell and Synnott (1987).

A total of 24 no. sites were surveyed. Of these, 17 are reported below. Sites 1-12 were considered to be of highest value and are described in greatest detail. Recommendations are made for ecological enhancement or conservation of these sites. A further 5 no. sites are also briefly described.

2.2 Limitations

The survey work was carried out at an optimal time for botanical / habitat survey. A dedicated bird count was outside the remit of this work, however any species seen or heard were noted. Specific bird habitat types (e.g. rookeries) were recorded. Observations on habitat quality for birds was also noted. Similarly, a bat detection survey was not carried out. However, potential bat habitat was noted when observed and recommendations made for future work where appropriate.



3. Results

3.1 The Habitats of Monaghan Town

Site 1. Ulster Canal Park

This is an excellent piece of linear habitat within a built-up area. There is much reed-mace, water horsetail and reed sweet-grass within the canal cut. The margins of the canal are unmown for a margin of around 0.5m in depth from the canal. The grassland area here contains much creeping buttercup, nettle, docks, rosebay willowherb and wild-turnip. A footpath runs to the east of the canal. Much of the water surface was covered with emergent plants such as arrowhead or floating vegetation such as duckweed but c. 3m of width of canal was open water.

Open water and substantial reed fringe of this old waterway in Ulster Canal Park



The canal is overhung with crack willow and several semi-mature alders. A moorhen was observed here. There are ornamental shrubs to the west of the path. Much graffiti and other evidence of anti-social behaviour was seen here. The western side of the canal is inaccessible. Here there is reed-mace, nettles, reed sweet-grass and a narrow woodland strip of crack willow with some hawthorn. A limited amount of Japanese knotweed is found close to the northern end of this section of canal.

Habitat types found: Canal FW3

Site 2. Peter's Lake

This is a naturally-formed lake of c. 0.5 hectares. The lake has a very well-developed fringe of reeds and other plants including reed-mace, iris, butter-bur and bitter-sweet. Behind this are grasses such as annual meadow-grass and nettle. The reed-fringe is up to 2m deep in areas. Anglers have cut into this fringe in places. There are both wild and feral ducks on the lake. There are a number of ornamental trees around the lake including weeping willow, paper birch and silver birch. Mature trees on the south and west of the lake include silver birch, ash and Leyland cypress, there is some natural regeneration of trees on the lake edge which comprises alder, ash, crack willow and grey willow.

Non-native ornamentals growing here include *Hypericum* sp., cordelines and broad-leaved lime.



Lake margin vegetation serves as good quality habitat for a range of species at the lake

The north side of the lake has more substantial beds of common (*Phragmites*) reed up to 4m deep. On the landward side of this are nettle, creeping buttercup, butter-bur, docks, iris and bindweed. There are also some 20 no. individual plants of Japanese knotweed. Thistle and purple loos-strife are occasionally found here. There is excellent habitat on the north side of the lake where the crack willow overhangs the lake edge. Moorhen were breeding here. This would be an important habitat for fish species also.

Habitat types found: FL4 – Mesotrophic lake, WD5 – Scattered trees and parkland

Site 3. St. Davnet's Hospital Grounds

This is the largest of the areas surveyed within the town boundaries. It is also highly varied. There are two large field of improved (agricultural) grassland. A very good quality hedgerow is found to the north and west of these fields which includes mature hawthorn, elder and dog-rose. This separates the grounds from the canal. There are some mature ash in this and there is an earth bank. There is an unmanaged strip of grassland with much creeping buttercup running alongside the canal. Most of the grass here is perennial rye-grass but there is also foxtail, Yorkshire fog and timothy. The opposite side of the canal was not accessible but appeared to be very overgrown and unmanaged. This forms extremely good habitat. Several bird species were recorded here: tree sparrow, greenfinch, blue tit and great tit.

There are very many mature trees found in the grounds of the hospital and these are listed below.

Box 1. Trees of St Davnet's

Lawson's cypress

Beech

Elder

Japanese cherry laurel

Holly

Horse chestnut

Scot's pine

Leyland cypress

Bay

Ash

Apple

Hawthorn

Sycamore

There is much parkland /amenity grassland area and the grass is well-maintained. However, there are some very nice mature treelines including a double treeline of Scots pine with a hawthorn understorey which runs west to east at the south of the site. There is also a nice treeline of young birch and bird cherry in this area. Just north of this (running parallel) is an orchard which is only slightly overgrown. This area would be valuable for a number of bird species. There is a very nice treeline of mature beech, horse chestnut and Scots pine adjoining this to the north. There is good umbellifer growth here but little understorey. The ground flora is quite poor also. There is a massive although apparently contained infestation of Japanese knotweed.

Japanese knotweed in the grounds of the hospital. This is an unwelcome invasive plant which has great ability to spread



There are several old buildings as well as some mature trees with ivy that offer potential bat habitat. There are also some ditches, earth banks and stone walls that offer additional interest.

Site 4. Glen Road

This is an area of broadleaved woodland that occurs on both sides of the Glen Road. Only the eastern side could be fully surveyed as the western side is in private ownership and the owner was not present on day of visit.

The woodland is a very varied mixture. The canopy includes mash which are regenerating but also mature sycamore. The understorey is very varied, comprising young sycamore, elder, hawthorn, holly, beech and blackthorn. There is a very healthy ground flora with lots of arum, ivy, primrose, harts-tongue

fern and hard fern. The canopy become dominated by Scots pine and sessile oak.

The slope here becomes stepped and there are violets, herb Robert and montbretia on the bank. Dumped garden waste may reduce the quality of the woodland here. However, there are several mature oaks. This area was noted as being high quality habitat for birds. There is very substantial ivy growth on some of the oaks though this has been cut in places some time ago. Wood melick was occasionally found. Hazel appears in the southern part of the wood and ash becomes more frequent here. There is consequently an open canopy here which allows woodland edge plants such as enchanter's nightshade and garlic mustard (jack by-the-hedge). There is good hawthorn regeneration here.



Mixed broadleaved woodland flanks both sides of the Glen Road.

A stream flows in a northerly direction on this side of the road but is not accessible. There is crack willow, black poplar and sycamore (all young) on the banks. The banks here also have hedge wound-wort, cow parsley, creeping buttercup, ribwort plantain, vetches, docks and hogweed.

To the north of the banks here, there has been landscape planting of rhododendron and privet.

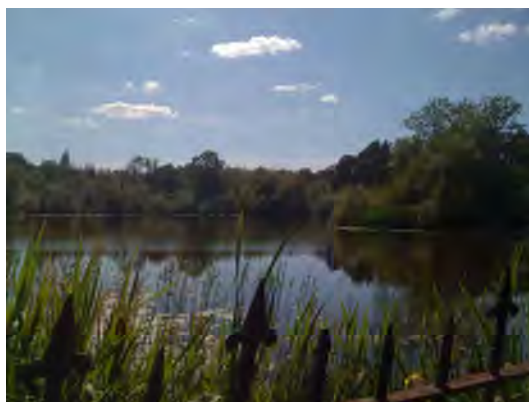
The west side of the road is private grounds. The canopy is made up of oak, ash and beech with a hazel and hawthorn understorey. There is a 4m deep strip beside the road which includes false oat-grass, much creeping buttercup, herb Robert, docks and nettles and a line of rowan saplings along a post and rail fence. There is Japanese cherry laurel in places with many ferns (unidentified) under the shade of the beech. Part of the wood here has a healthy understorey of hazel and holly. Cherry laurel is starting to spread on the north side of the woods.

Habitat types found: Mixed broadleaved woodland – WD1, Ornamental/ non-native shrub – WS3

Site 5. Lake at Louis Convent

This is one of the most notable habitat areas within Monaghan town. The extent of the open water as well as the intact nature of the site make this of particular value for wildfowl. There is no access generally permitted to the lakeshore area from the convent school. The site could not, therefore, be properly surveyed. It was seen that there is an extensive reed fringe made up mostly of common reed and reed canary-grass on around 60% of the lakeshore (to the north, east and west). To the south, there appears to be extensive crack willow and alder growth. This is very valuable habitat. Behind these extending southwards is conifer woodland made up of mature and over-mature trees. Mallard, swallow and heron were among the birds utilising the site on day of visit. Yellow water-lily extends some 5m from the shoreline all around the lake. There is also some water horsetail and some bramble. Amenity grassland is found to the west of the lake. A significant amount of Japanese knotweed was found in the woodland/scrubby area on the north of the lake. This area is used for disposal of cut grass and the risk of spreading this plant further is high.

There is excellent wildfowl habitat as well as a range of tree species at this site. Inaccessibility has protected this site.



Habitat types found: FL4 – Mesotrophic lake, GA2 – Amenity grassland, WD3 – Mixed conifer woodland

Site 6. Tommy Young's Wood

This is an ash dominated woodland on a steep slope adjoining the N54 (Clones Road) to the south west of Monaghan town. There is a canopy formed by mature ash up to c. 16m in height and of 5m crown spread. The ash is regenerating. There is a very mixed and healthy understorey of ash, hazel, hawthorn and bird cherry. Bramble is abundant. Bluebells, enchanter's nightshade, and wood avens are all frequent. As are speedwells, common dog violet and hogweed along the paths. Pale willow-herb was also found here.

Sycamore and elm were seen to be regenerating in some places. A number of paths are found through this wood which become very steep in places (up to 1:4). There is activity open canopy which has led to a very rich ground flora. There is up to 90% ground cover of plants in places, enchanter's nightshade being most abundant at time of survey. A jay was observed in the woods. There was an amount of fallen and standing dead timber noted. Holly was seen to be rare in the understorey.



The pedestrian entrance to
Tommy Young's Wood
crossing the Ulster Canal

To the south of the wood (on the south-facing slope), goat willow is the dominant tree for a significant area. This is regenerating and it appears to have been managed some time previously. Up the hill from this, ash (mostly young) becomes the dominant tree. This allows a more open and mixed understorey which is made up of young ash, elm and bramble. There is a high percentage ground cover of ivy at the edge of the wood here. The wood meets a plantation of Sitka spruce which forms the dominant vegetation for a small corner of the woodland. It was noted that the paths in the woodland are in very good condition.

Habitat types found: WN2 – Oak-Ash-Hazel woodland , WD4 – Conifer plantation

Site 7. Rossmore Park

Rossmore Park is a large and varied site of over 700 hectares. It includes a variety of habitats including lakes, streams, grassland and mixed woodlands. However, the area of Rossmore Park lying closest to Monaghan town and within the (60kph) speed limit area is of less diversity. The section of woodland (some 2-3 ha) within this area is described below.

The north-west corner of the park is mainly comprised of conifer plantation. This is fringed with mature hawthorn, semi-mature beech and some mature ash to c. 12m in height. There is also some mature blackthorn which has developed into thickets. There are several paths within this area which were seen to be in good condition. However, there is evidence of fly-tipping of rubbish here.

In places there was seen to be a healthy understorey developing. This comprised elder and hazel and ash was seen to be regenerating in places. There was also some sycamore regeneration noted. There is a fair amount of dead timber, both standing and fallen. It was noted that this is good habitat for bird species such as the goldcrest and the siskin. Some elm is also regenerating. Ground flora is poorer in the conifer plantation but the path edge flora includes hogweed, male fern, wood avens, nettle and enchanter's nightshade. Ivy is abundant in most of the areas.

There is evidence of some anti-social behaviour here including informal camping and bonfires.

Habitat types found: WD4 – Conifer plantation, WD2 – Mixed broadleaved / conifer woodland

Site 8. The Shambles River

This stream is partially canalised in the short section of its route through the grounds of the St. Louis Convent. Reed sweet-grass is the only wetland plant in evidence. The stream is overhung with mature crack willow, elder and lime. There are some mosses in the stream but no macrophytes. The section here is a long riffle stretch. The stream is then subterranean until emerging again downstream of the shopping centre car-park.

Here there is c. 110m of channel which flows between the Credit Union, apartments and shops on the east side and the site of the proposed new underground car-park and offices on the west.



Area of Shambles behind Credit Union. Pondweed indicates very slow flow.

Circa 40% of the channel is open water. Another 10% is covered with pond weed (*Potamogeton* sp.) and another 40% with duckweed. Many minnow were noted and moorhen breed here. The banks are densely vegetated although with a poor diversity of plants including nettle and bindweed. Most (c. 60%) of the stream is overhung with crack willow, poplar, sycamore and hazel. There is a shallow concrete weir (c. 0.5m) just downstream from the Credit Union.

The stream re-emerges after the Market Square. The bankside vegetation is largely poor, being dominated by bramble and young sycamores and some goat willow. Downstream of the bridge the channel is more natural. The treeline is more mature and is dominated by willow.

Habitat types found: FW2 – Depositing/lowland river.

Site 9. Ulster Canal

This is one of the best examples of linear wildlife habitat in Monaghan town. A form of habitat often referred to as a 'wildlife corridor'. The canal is very variable throughout its length within the town. The section at Ulster Canal Park has been described above. Some sections have been infilled and no wetland habitat remains. In other areas (e.g. at Tommy Young's Wood adjacent the N54) there are substantial areas of water.

Ulster Canal on Clones Road.
This is very valuable linear
habitat.



In this last there is a well-developed over-storey of alder which is regenerating across the channel. Many tadpoles were seen here. There are several sedges, iris, meadow-sweet and reed sweet-grass. Most of the surface is covered with duckweed. A dead otter was found in the channel here. This may be a road-kill from the adjacent (and busy) national road. South of this the canal is harder to locate within the grey willow and alder woodland that has developed here.

The underground section of the canal is partially accessible to the north of market square. Some infilling has taken place. Maiden-hair fern and bent

grasses are the only vegetation here. The subterranean section may offer potential bat habitat.

North of the Market Square the canal reappears but it is substantially infilled. Mature treelines mark the route of the channel and the towpath. These are of grey, goat and crack willow and there is also sycamore. The old channel itself is dominated with agricultural grasses.

Habitat types found: FW3 – Canals, WL2 – Treelines.

Site 10. River Blackwater

This river represents another linear habitat and wildlife corridor although it does not pass through the town centre itself. The river mostly flows through agricultural lands though this is not intensively farmed. The river channel itself was seen to be in good condition and has numerous meanders with riffle and glide stretches. It was noted that there is excellent quality habitat for kingfishers in areas. Trout were observed as well as many demoiselles. Good riparian habitat exists in several areas with the river overhung with mature willows. Floating sweet-grass was seen in one area.



The River Blackwater at Ballyalbany. Excellent quality habitat for kingfishers exists here

Habitat types found: FW2 – Depositing/lowland river, GA1 – Agricultural grassland

Site 11. Latlurcan

This is a very old cemetery with a small rendered stone church. The cemetery area is relatively species-poor. The vast majority of the surface area is grass which is frequently cut with only some rougher areas. There are only 4 no. mature trees a beech and 3 no. planes. There is a good quality hedgerow on a bank on the south side of the cemetery which is mostly hawthorn with some blackthorn and ivy. There are 2 no. young ash in the south west corner. It should be noted that there are some very nice mature trees, hedgerow and stone wall to

the south west of the cemetery around some roughly grazed sites. These provide a valuable link of habitat toward the town centre.

Habitat types found: GA2 – Amenity grassland, WL1 – hedgerows.

Site 12. Wright's Wood (pNHA)

This is a woodland site which is a proposed Natural Heritage Area, c. 2 miles from Monaghan town centre. It is outside the speed limited area. However, it is the only designated site close to the town and having valuable habitat area it warrants inclusion in this report. The site is located off the R186 Tydavnet Road and it is accessed via agricultural lands.

The wood extends over a drumlin and is a very good example of mixed broadleaved woodland. There are mature oaks (in good condition) as well as mature ash, mature and semi-mature beech and larch. The canopy is very open in places and there is much nettle, herb Robert, jack by-the-hedge, speedwells, hogweed and ground elder. There are some mature sycamore but these are in far lesser number than the mature native trees of ash, hazel and birch.

Some wetter areas are found to the north and northwest of the wood. Hazel has been coppiced in recent years here. Some poaching by livestock has also occurred. Much of the centre of the woodland is made up of hazel and young ash which makes for a very open canopy. There is a great deal of fallen dead timber. There is at least one rabbit warren but no evidence of other mammal species. A sparrowhawk was heard over the wood. This woodland is an excellent site for woodland wildflower species.

An open canopy allows a diverse and interesting ground flora in the wood.



Habitat types found: WN2 – oak-ash-hazel woodland, WD1 – Mixed broadleaved woodland

3.2 Other Habitats of Monaghan Town

Sites containing other habitat areas but of lesser importance are briefly described below. (Site numbers refer to Appendix A)

Site 13. Ballyalbany Church and Grounds

There is not very valuable habitat throughout most of the grounds as these are very well-maintained. However, there is a woodland area here which may be of value if allowed to naturalise. The canopy is mostly non-native being of Leyland cypress but there are also some mature silver birch and an elder understory developing. Beside this site is some derelict ground which is fringed with mature horse chestnut, plane and larch. There is a well developing ground flora here. This site adjoins the Blackwater. Some fly-tipping has occurred here.

The grounds at Ballyalbany are well-maintained but the small woodland area may naturalise well.



Site 14. Cathedral Grounds

Although there is a variety of trees and shrubs here, most of these are non-native and offer little habitat area. The grass is very well managed and has few herb species. There are two young pendunculate oak, a weeping ash, sycamores, larch, cypress and lime trees. All of these last would provide some cover or habitat for breeding birds.

Site 15. Gavin Duffy Park / Rooskey Vale

Some of the treelines in this area were seen to be of value to birds. There is a rookery here. Existing treelines of willow, hawthorn and sycamore may be extended in areas to form more valuable habitat area. Some mature hawthorns could be connected with some of the vegetation of the hospital grounds above this area.

Site 16. Field behind old Customs Station

This is an area of (apparently) ungrazed agricultural grassland to the south of the roundabout with the N2 bypass. The River Shambles flows through these land and the Ulster Canal forms the eastern boundary of the site. The area was not accessed but several mature hawthorn and semi-mature ash were seen. The

areas adjoining the watercourses here could be of interest. The area could provide a venue for nature walks or training.

Site 17. Trees in front of School Grounds

This site is an area of mature and semi-mature trees which front the school grounds here. Most of these are firs with some mature cypress. There are some regenerating elder and ash but the habitat is relatively poor here. However, the area could be improved with some understorey planting of native trees such as holly and elder and the removal of some of the young sycamores. There are some whitebeam planted along the drive.

3.3 Notable Species

Otter, a protected mammal listed Annex II of the Habitats Directive (1997) was found in the Ulster Canal. Jay, a species of long-established broadleaf woodland was found in Tommy Young's Wood. Pale willow-herb, a rare plant species was also found here. Black-cap and coal tit, also woodland specialist birds were found in this wood and in Wright's Wood.

Japanese knotweed, a non-native invasive plant was found in several areas surveyed. Himalayan balsam, another invasive exotic was found in one location beside the River Blackwater. Several trout were seen in this last river. Although not intensively surveyed, only one of the wetland sites had tadpoles of the common frog.

All of the bird species observed during the survey are protected under Irish law (Wildlife Acts, 1976, 2000). Of these, four - the swallow, coot, kestrel and swift are on the so-called Amber List of Birds of Conservation Concern (Birdwatch Ireland, 2008), being of medium conservation concern.

3.4 Notable Habitats

Of the habitat areas surveyed as part of this project. Eleven may be considered as being of at least local significance to biodiversity. These are shown in the box below:

Box 2. Sites of at least local significance to biodiversity

Ulster Canal Park
Peter's Lake
St. Davnet's
Glen Road
Convent Lake
Tommy Young's Wood

Rossmore Park
The Shambles River
The Ulster Canal
River Blackwater
Wright's Wood

4. Discussion

4.1 The Importance of Habitats Surveyed: Proposed Local Biodiversity Areas

The survey has shown that there is a relatively broad range of habitat types within the area under survey. Included among these is only one site which has been designated for the protection of habitat that is considered to be of national importance (proposed Natural Heritage Area). While other areas contain a relatively diverse range of plants, they are not so noteworthy and would not be statutorily protected (e.g. road verges, old walls). However, it is reasonable to describe these of being of local significance. That is, their loss would be significant to native species in a local context. They are therefore worthwhile protecting and even enhancing in the medium to long-term.

Local Biodiversity Areas are non-statutorily designated areas which are considered to be of local ecological significance. They have been in use in Ireland since 2005. The term does not confer any legal protection or restriction on the site but does serve to highlight areas of particular biodiversity importance to a community or area (see Mabey, 1980).

It is proposed that the following areas be adopted as Local Biodiversity Areas:

Box 3. Proposed Local Biodiversity Areas

Area	Rationale
Ulster Canal Park	Linear habitat, central location
Peter's Lake	Diverse wetland habitat in central location
St. Davnet's	Variety of habitat and tree species
Glen Road	Example of semi-natural woodland
Convent Lake	Value for wildfowl, undisturbed reed fringe habitat
Tommy Young's Wood	Diverse broadleaved woodland, rare species
Rossmore Park	Variety of habitats, extent and accessibility
The Shambles River	Linear habitat, urban river
The Ulster Canal	Linear wetland habitat, protected species
River Blackwater	Linear habitat, salmonid stream
Wright's Wood	Diverse broadleaved woodland, pNHA

4.2 Planning Habitat Management for Monaghan: Local Biodiversity Plan

It is highly recommended that an over-arching plan for habitat management be produced. This may be produced quite easily – this present survey forming the

basis for much of the work, and in the short to medium term (i.e. within a calendar year). This would be a Local Biodiversity Plan. This could be supported by the local authority which have a statutory obligation in this regard and also organisations such as the Heritage Council. The advantage to the Local Biodiversity Plan is that it provides a template for planning and executing biodiversity actions, projects and any other works.

Some examples of such works are given in the following section.

4.3 Recommendations for Habitat and Species Management

The following section makes recommendations for habitats included in this survey.

a. Ulster Canal Park

- The unmown area of amenity grassland here should be widened.
- The infestation of Japanese knotweed at the north of the site should be removed.

b. Peter's Lake

- Lakeside trees should be maintained
- The infestation of Japanese knotweed should be removed
- This site should be considered for activities such as school visits

c. St. Davnet's

- The ground managers should be contacted with regard to carrying out removal of the Japanese knotweed here.

d. Glen Road

- Some litter may be removed from the site
- Householders could be contacted re: correct disposal of garden waste

e. Convent Lake

- The infestation of Japanese knotweed should be carefully planned and carried out here as there is a risk of spreading to the remainder of this site.

f. Tommy Young's Wood

- Some sycamore should be removed from the site
- Some non-intrusive signage within the woodland may be considered
- A number of educational uses of the site should be considered

g. Rossmore Park

- Some sycamore should be removed from the site. Coillte may be contacted in this regard.
- An anti-litter project or clean-up may be planned

h. The Shambles River

- River should be kept clear of debris and rubbish

i. The Ulster Canal

- Some litter and rubbish should be removed from the canal

j. River Blackwater

- The river should be signed at the larger bridges
- Debris should be removed from the river

k. Wright's Wood

- Fencing should be improved to stock-proof the woodland areas.

4.4 Biodiversity Projects for Monaghan Town

As part of this work, the survey has shown some areas of possible work to conserve, enhance and celebrate the biodiversity of the town. Recommendations for possible biodiversity-based projects for Monaghan are given below:

- Tommy Young's Wood should be used for activities for environmental education or biodiversity awareness. It is recommended that some interpretation be put in place to inform townspeople of the value of this area. This may be based in the town or in the wood itself.
- Similarly, some interpretation for the Ulster Canal should be devised. The Park here would be highly suitable for biodiversity awareness events. Some longer canal walks are also recommended.
- A kingfisher survey of the River Blackwater would be a highly useful project that could easily be achieved by a community group.

- A Monaghan wildlife ‘trail’ could be created, choosing some of the sites highlighted in this present report. A single wildlife information sign could be created and some literature produced for a self-guided trail.
- Wright’s Wood represents an excellent venue for wildflower or fungi walks. However, access not currently allowed to the site, which is in private ownership. It is recommended that the owner be contacted if the group are interested in using this site.
- A dragonfly and damselfly survey would also be a very useful and achievable piece of work. There are numerous sites where this could be carried out including the canal, the two rivers and Peter’s and Convent Lake.
- Access to this last could also be sought. This would be an excellent venue for biodiversity events, given the quality and extent of natural and semi-natural habitats found here.

Reed fringe, lakeside trees and an aerating fountain all improve the habitat at Peter’s Lake



References

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Appendix A (2): Aerial Photographs of Sites

1. Lake and woodland at St. Louis Convent



2. Trees at Gavin Duffy Park / Rooskey Vale.



3. Woodland at Glen Road



4. Peter's Lake and adjacent trees



5. Grounds of St. Davnet's



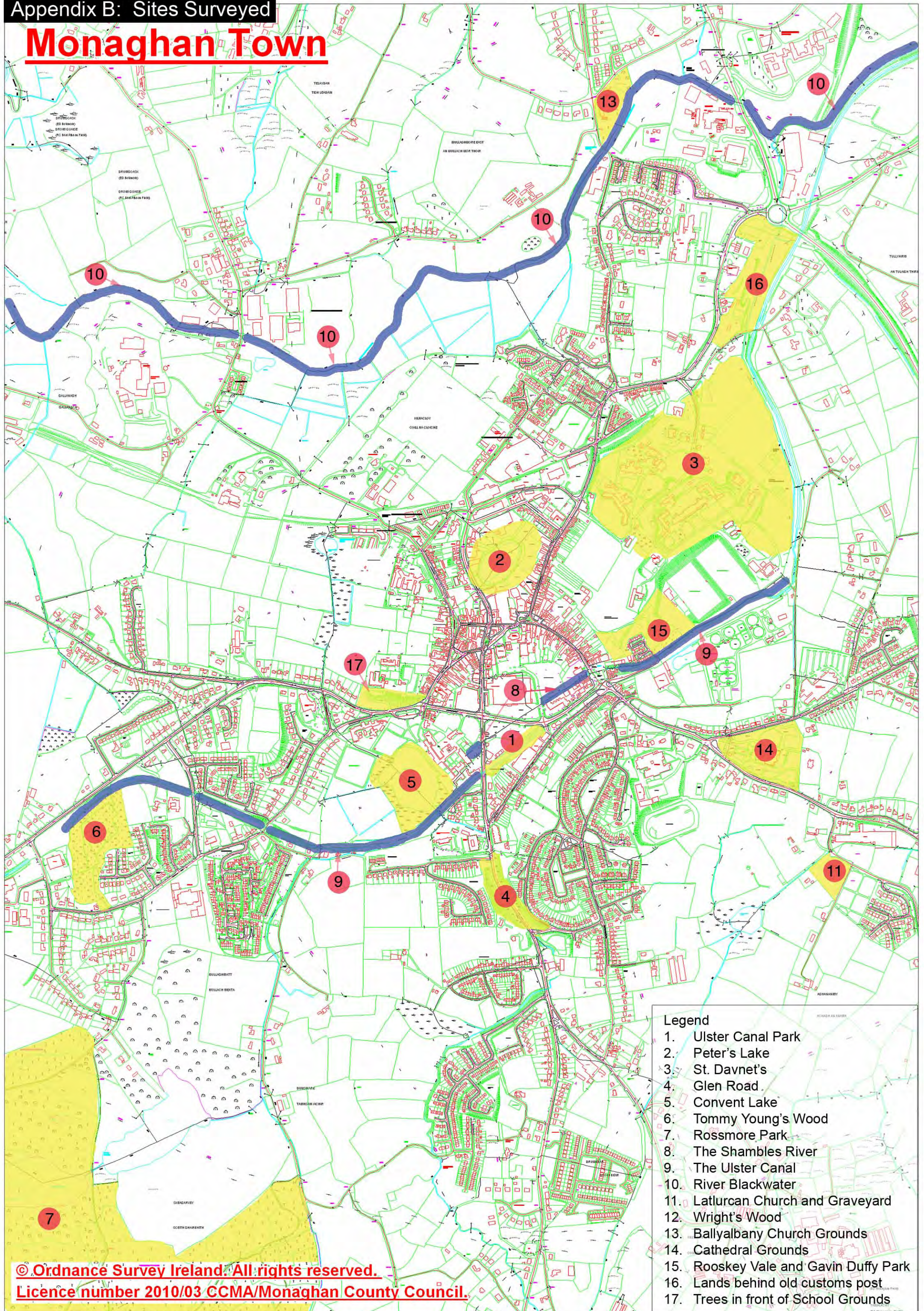
6. Tommy Young's Wood



7. Ulter Canal Park



Monaghan Town



Legend

1. Ulster Canal Park
2. Peter's Lake
3. St. Davnet's
4. Glen Road
5. Convent Lake
6. Tommy Young's Wood
7. Rossmore Park
8. The Shambles River
9. The Ulster Canal
10. River Blackwater
11. Latlurcan Church and Graveyard
12. Wright's Wood
13. Ballyalbany Church Grounds
14. Cathedral Grounds
15. Rooskey Vale and Gavin Duffy Park
16. Lands behind old customs post
17. Trees in front of School Grounds

Appendix C Species Names

i: Plant Species

Scientific Name	Common Name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Aegopodium podagraria</i>	Ground elder
<i>Aesculus hippocastanum</i>	Horse chestnut
<i>Agrostis capillaris</i>	Common bent
<i>Agrostis stolonifera</i>	Creeping bent
<i>Alliaria petiolata</i>	Garlic mustard (or Jack by-the-hedge)
<i>Alnus glutinosa</i>	Alder
<i>Alopecurus pratensis</i>	foxtail
<i>Anthriscus sylvestris</i>	Cow parsley
<i>Arrhenatherum elatius</i>	False oat-grass
<i>Arum maculatum</i>	Arum
<i>Asplenium scolopendrium</i>	Hart's-tongue fern
<i>Betula papyrifera</i>	Paper-bark birch
<i>Betula pendula</i>	Silver birch
<i>Blechnum spicant</i>	Hard fern
<i>Brassica rapa</i>	Wild turnip
<i>Calystegia sepium</i>	Hedge bindweed
<i>Chamaecyparis lawsoniana</i>	Lawson cypress
<i>Circaea lutetiana</i>	Enchanter's nightshade
<i>Cordyline sp.</i>	Cordyline sp.
<i>Crataegus monogyna</i>	Hawthorn
<i>Cupressocyparis leylandi</i>	Leyland cypress
<i>Epilobium angustifolium</i>	Rosebay willowherb
<i>Equisetum fluviatile</i>	Water horsetail
<i>Fagus sylvatica</i>	Beech
<i>Fallopia japonica</i>	Japanese knotweed
<i>Fraxinus excelsior</i>	Ash
<i>Fraxinus var pendula</i>	Weeping ash
<i>Geranium robertianum</i>	Herb-robert
<i>Glyceria fluitans</i>	Floating sweet-grass
<i>Hedera helix</i>	Ivy
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire fog
<i>Hypericum sp.</i>	St. John's wort sp.
<i>Ilex aquifolium</i>	Holly
<i>Impatiens grandifloa</i>	Himalayan balsam
<i>Iris pseudacorus</i>	Yellow iris
<i>Larix decidua</i>	Larch
<i>Laurus nobilis</i>	Bay
<i>Lemna minor</i>	Common duckweed
<i>Ligustrum ovalifolium</i>	Privet
<i>Lolium perenne</i>	Perennial rye-grass
<i>Lythrum salicaria</i>	Purple loose-strife
<i>Malus sylvestris</i>	Apple
<i>Melica uniflora</i>	Wood melick
<i>Nuphar lutea</i>	Yellow water lily
<i>Petasites hybridus</i>	Butterbur
<i>Phleum pratense</i>	Timothy

<i>Picea sitchensis</i>	Sitka spruce
<i>Pinus sylvestris</i>	Scots Pine
<i>Plantago major</i>	Plantain (broad-leaved)
<i>Platanus sp</i>	Plane
<i>Poa annua</i>	Annual meadow grass
<i>Polypodium vulgare</i>	Polypody (fern)
<i>Populus nigra</i>	Black Poplar
<i>Potamogeton sp.</i>	A pondweed
<i>Primula vulgaris</i>	Primrose
<i>Prunus laurocerasus</i>	Cherry laurel
<i>Prunus padus</i>	Bird cherry
<i>Prunus spinosa</i>	Blackthorn
<i>Quercus petraea</i>	Sessile oak
<i>Quercus robur</i>	Pedunculate Oak
<i>Ranunculus repens</i>	Creeping buttercup
<i>Rhododendron ponticum</i>	Rhododendron
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus</i>	Bramble
<i>Rumex spp.</i>	Docks
<i>Sagittaria sagittifolia</i>	Arrowhead
<i>Salix caprea</i>	Goat willow
<i>Salix cinerea</i>	Grey willow
<i>Salix fragilis</i>	Crack willow
<i>Salix x sepulcralis</i>	Golden weeping willow
<i>Sambucus nigra</i>	Elder
<i>Solanum dulcamara</i>	Bittersweet
<i>Sorbus aucuparia</i>	Rowan
<i>Stachys sylvatica</i>	Hedge woundwort
<i>Tilia platyphyllos</i>	Broad-leaved lime
<i>Tilia spp.</i>	Lime
<i>Typha latifolia</i>	Reedmace (also known as Bulrush)
<i>Ulmus glabra</i>	Wych elm
<i>Urtica dioica</i>	Nettle
<i>Veronica spp</i>	Speedwells
<i>Vicia sp</i>	Vetch

ii. Animal Species

Scientific Name	Common Name
<i>Accipiter nisus</i>	Sparrowhawk
<i>Alcedo atthis</i>	Kingfisher
<i>Anas platyrhynchos</i>	Mallard
<i>Apus apus</i>	Swift
<i>Ardea cinerea</i>	Heron
<i>Carduelis chloris</i>	Greenfinch
<i>Falco tinnunculus</i>	Kestrel
<i>Fulica atra</i>	Coot
<i>Gallinula chloropus</i>	Moorhen
<i>Garrulus glandarius hibernicus</i>	Jay
<i>Hirundo rustica</i>	Swallow
Odonata zygoptera	Demoiselle
<i>Oryctolagus cuniculus</i>	Rabbit
<i>Parus ater hibernicus</i>	Coal tit

<i>Parus caeruleus</i>	Blue tit
<i>Parus major</i>	Great tit
<i>Passer montanus</i>	Tree sparrow
<i>Rana temporaria</i>	Common frog
<i>Salmo trutta</i>	Trout
<i>Sylvia atricapilla</i>	Black-cap

Appendix D: Some Photographs of Site

1. Ulste Canal Park. Note diversity of plants in margins and channel.



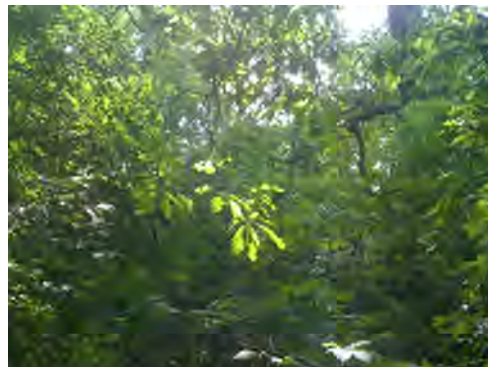
2. Peter's lake. The reed fringe is relatively intact and there are some valuable trees.



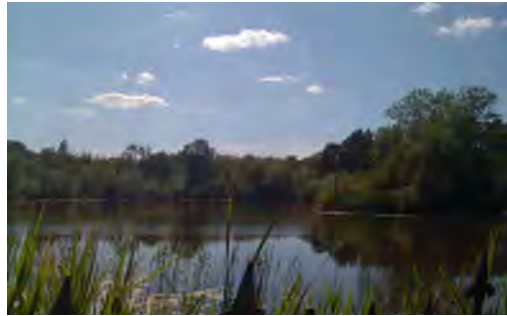
3. Disturbed ground, mature hedgerow and trees at St. Davnet's.



4. Mature oak canopy at the Glen Road.



5. Covent Lake. There is excellent shoreline habitat here.



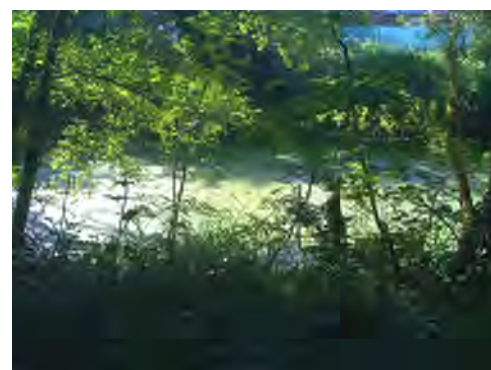
7. Bird cherry, one of the many trees found in Tommy Young's Wood. There is a very interesting ground flora here, too.



8. River Shambles behind Credit Union. Much of the channel is choked and only a small amount of the channel is above ground



9. Ulster Canal on N54. This is highly valuable linear habitat including wetland and woodland areas.



10. Area south of new N2 roundabout. Part of the River Shambles is here and the area is flanked by the canal.



11. River Blackwater. There is very good quality habitat to be seen here and most of the channel is undisturbed.



12. The southern boundary of the cemetery at Latlurcan is a mature hawthorn hedgerow.



13. The diversity of the wood as well as the amount of fallen timber makes Wright's Wood valuable for fungi as well as wildflowers.

