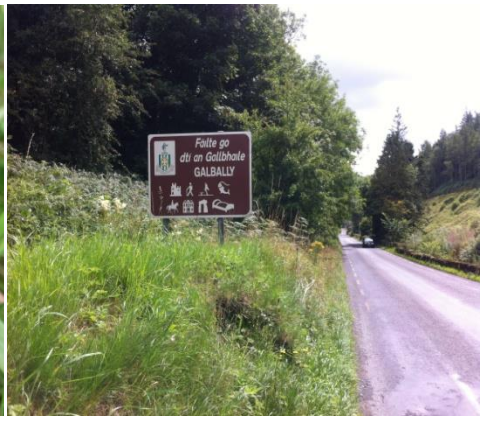
Galbally Tidy Towns

Wildlife Survey

&

3 Year Biodiversity Action Plan- May 2022 (Updated)



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Prepared By

Tony Kenneally B Sc

Contents

1.0 Introduction

This report was prepared by Tony Kenneally BSc, a qualified Wildlife Biologist, engaged by Galbally Tidy Towns to carry out a wildlife survey of Galbally

The wildlife survey was undertaken from June 2021 to May 2022 and identifies the different habitats in Galbally and their associated flora and fauna. This report presents the results of the wildlife survey and includes Galbally Tidy Towns 3 Year Biodiversity Action Plan based on the results of the wildlife survey.

According to the Tidy Towns Handbook (Department of the Environment, Heritage and Local Government, 2002.) the Wildlife and Natural Amenities Plan section of a 3 year plan should include:

1. Aims and objectives of 3 year plan
2. Description of habitats within area
3. Projects to enhance desirable communities and keep out unwanted species all carried out with a minimum of disturbance.

The following report is split into the 3 sections outlined above.

2.0 Aims and objectives - 3 year Biodiversity Action Plan

The aims and objectives of Galbally Tidy Towns in relation to wildlife and natural amenities are:

- To preserve and enhance the habitats within Galbally
- To raise awareness and appreciation of wildlife amongst the people of Galbally

- To actively involve the local community in wildlife and nature projects.
- To implement a programme of eradication where possible, of non native species.

These aims and objectives are based on the results of the wildlife survey and the recommendations made.

3.0 Habitats

A habitat can be defined as the type of environment in which plants and animals live. A habitat is determined by the type of plants that grow there, the climate and the geography of the area.

Galbally is a village in South-east County Limerick, situated in the Glen of Aherlow at the foot of the Galtee Mountains.. The surrounding countryside lies on predominantly limestone bedrock. Geology and soil type has a significant effect on plant type and distribution, with some plants preferring limestone soils and others preferring acidic soils. The landscape around Galbally contains a variety of habitats including woodland, hedgerows, rivers, streams and farmland. Farmland is the dominant habitat type in the surrounding landscape with sheep and dairy farming dominating. Habitats in the surrounding landscape were broadly surveyed and identified. This was necessary in order to gain a better insight of the flora and fauna in the surrounding countryside as well as within Galbally.

Habitats were recorded to Level III of the *Guide to Habitats in Ireland* (Fossitt, 2000), Fauna was identified by sight, and any signs such as droppings and prints were noted. A full species list for each habitat is included in Appendix 1.

3.1 Watercourses

3.1.1River Aherlow FW2

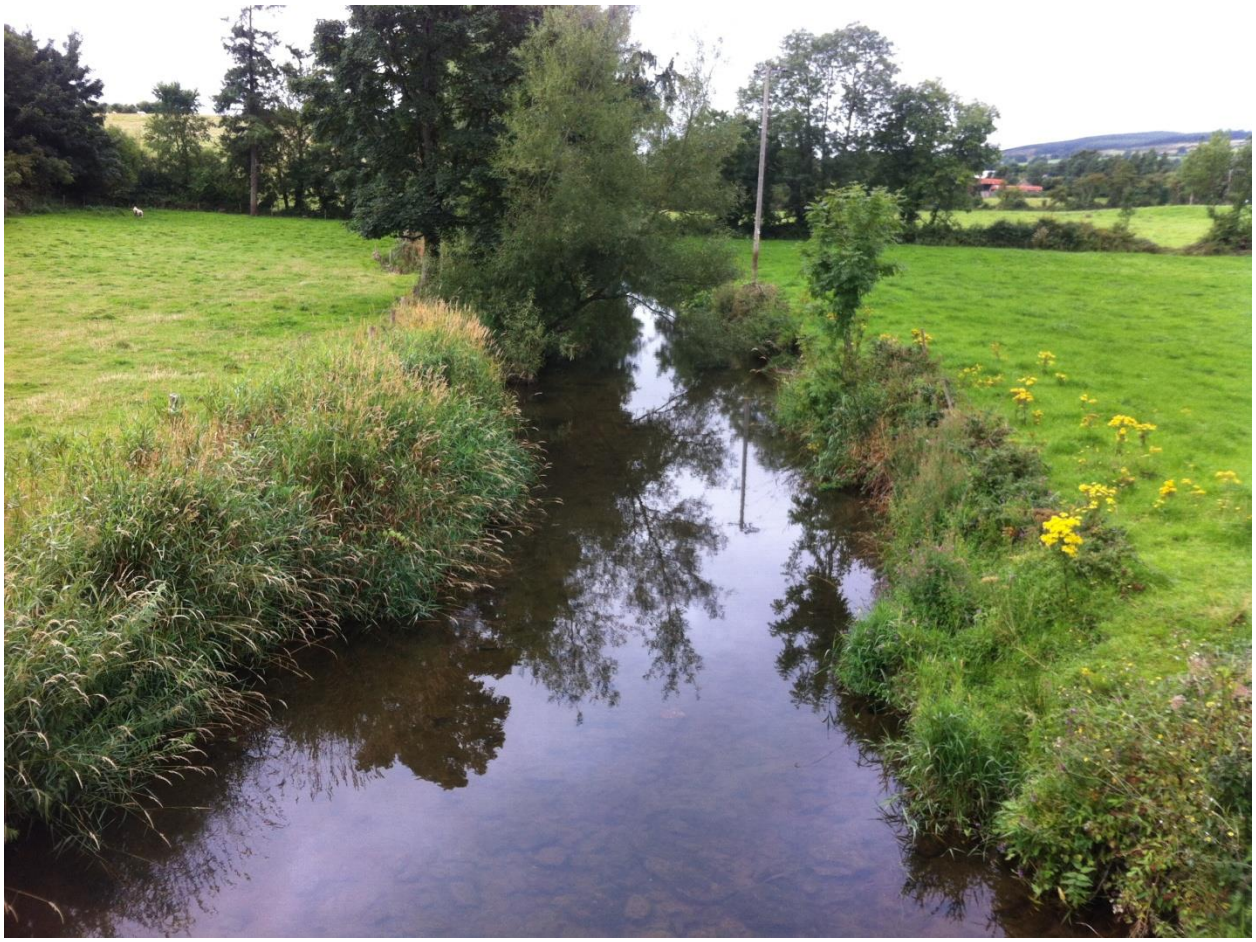

Fig.1. River Aherlow in Galbally

The River Aherlow is a small tributary river of the River Suir, rising near the village of Anglesborough in the Galtee Mountains and flowing in a North-easterly direction through Galbally. It joins the River Suir just north of Cahir in Co.

Tipperary. The section of the river at Galbally can be classified as a Depositing/lowland river (**FW2**) and is an important habitat and wildlife corridor for a variety of plant and animal species. The river is an important wildlife corridor linking the upland habitats to the lowlands, allowing animals to move safely from one habitat to another. It is the most important habitat type in Galbally for wildlife.

The Aherlow River is a designated site as it forms part of the Lower Suir SAC (Special Area of Conservation). The river is home to a number of protected species listed under Annex II and Annex IV of the EU Habitats Directive. Protected species recorded along the river in Galbally, included Otter (*Lutra lutra*), White-clawed Crayfish (*Austropotamobius pallipes*), Daubentons Bat (Myotis daubentoni), Pipistrelle Bat (*Pipistrellus pipistrellus*) and Salmon (*Salmo salmar*).

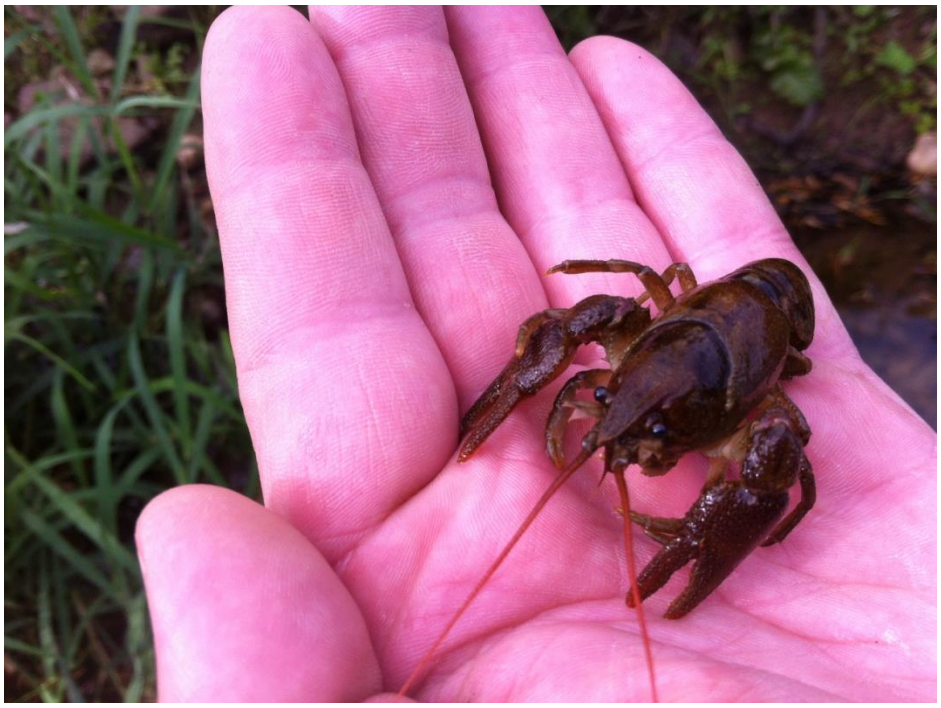

Fig.2. White-clawed Crayfish from the River Aherlow in Galbally.

Other fish recorded in the river included Brown Trout (*Salmo trutta*), and Three-Spined Stickleback (*Gasterosteus aculeatus*). Mink (*Mustela vison*), a non native species that causes serious declines in water bird populations was also recorded. An eradication programme for Mink has been recommended in the 3 Year Biodiversity Action Plan section of this report.

Birds recorded along the river included Dipper (*Cinclus cinclus*) Kingfisher (*Alcedo atthis*) and Moorhen (*Gallinula chloropus*). Grey Heron (*Ardea cinerea*) and Grey Wagtail (*Motacilla cinerea*), bird`s common by rivers were also recorded. The presence of Otters, Dippers Grey Herons and Kingfisher is indicative of clean water with a plentiful supply of fish so it is very encouraging that they are present in Galbally.

Fig.3. Dipper, common along the River Aherlow.

Riverside Flora

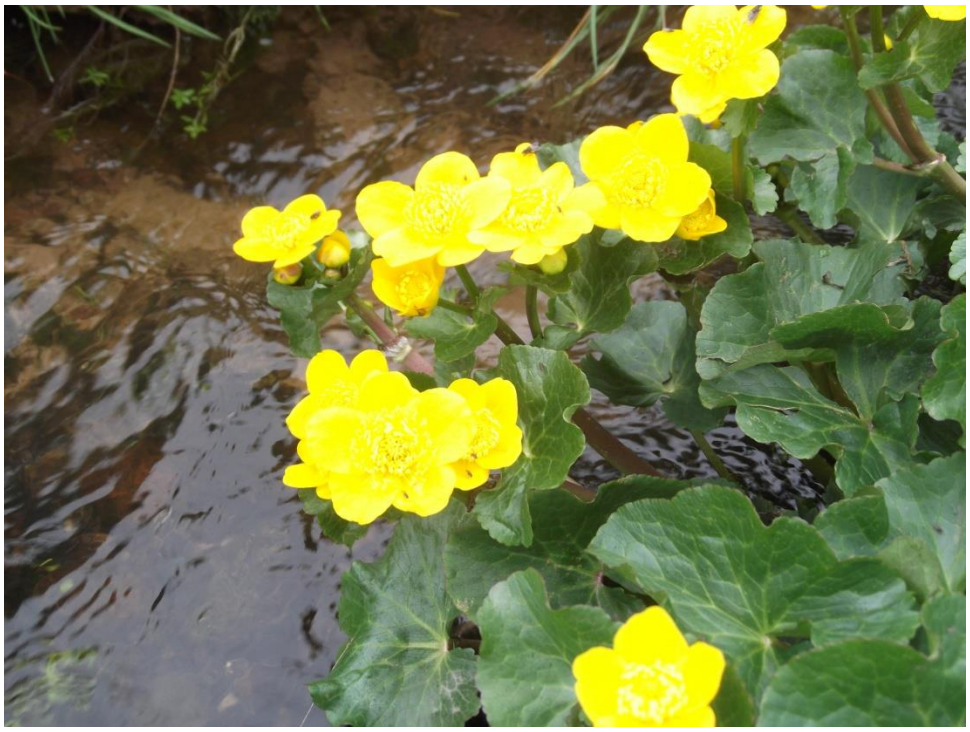

Fig. 4. Marsh Marigold along the banks of the Aherlow River.

The banks of the river contained a wide variety of wildflowers associated with freshwater rivers as well as grasses, sedges and reeds. Common Reed (*Phragmites australis*) formed patches of reedbeds along the river. Marsh Marigold (*Caltha palustris*) can be seen growing in places along the riverbank from April-July. In spring, Lesser Celandine (*Ranunculus ficaria*) was common on the river banks.

Other wildflowers recorded included Water Mint (*Mentha aquatica*), Purple Loosestrife (*Lythrum salicaria*), Yellow-flag Iris (*Iris pseudacorus*) and Hemlock (*Conium maculatum*). Cow Parsley (*Anhtriscus sylvestris*), Angelica (*Angelica sylvestris*) and Butterbur (*Petasites hybridus*) were also common along the riverbanks, with Cuckoo Flower (*Cardamine pratensis*) and Meadowsweet (*Filipendual ulmaria*) common in the wet areas along the banks.

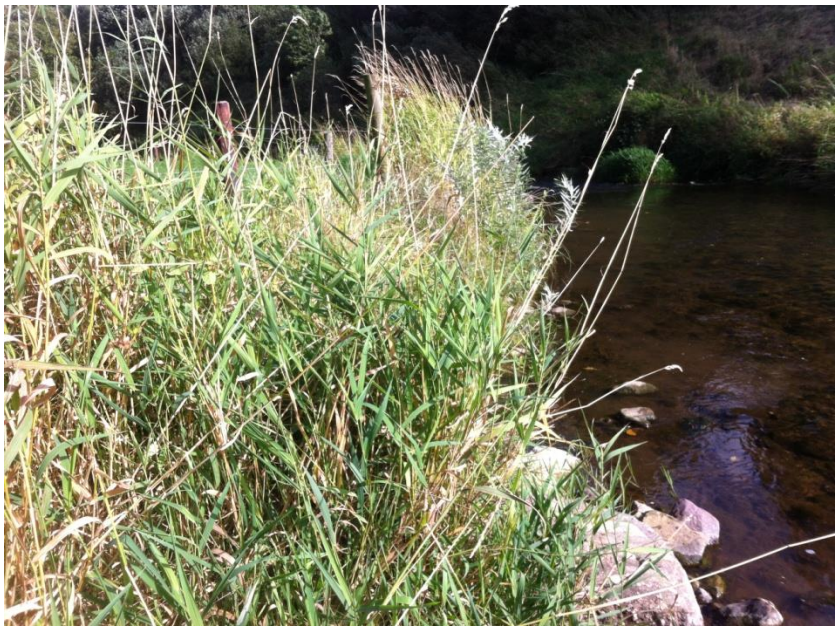

Fig.5. Common Reed (*Phragmites australis*) on the riverbank

Trees recorded along the riverbank included typical riverside species such as Alder (*Alnus glutinosa*) and Willow (*Salix cinerea*) with Ash (*Fraxinus excelsior*) also occurring, these are all native trees and support a rich diversity of invertebrates. Non native species recorded included Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*) and Horse Chestnut (*Aesculus hippocastanum*).

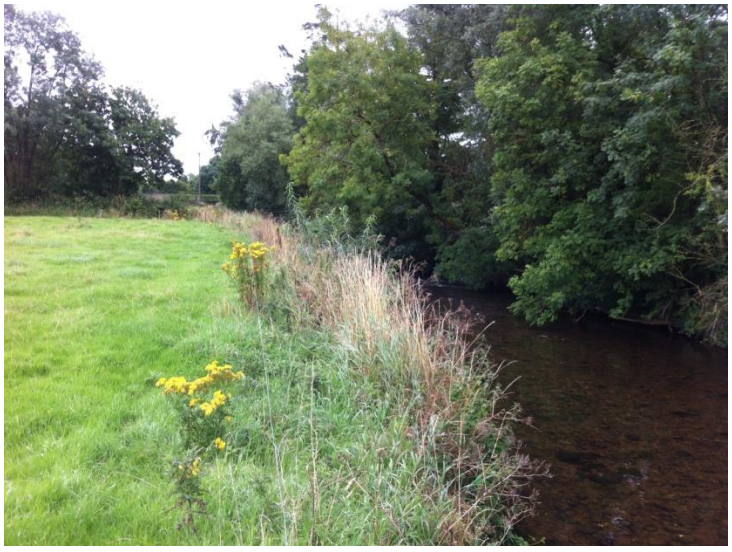

Fig 6. Ash, Sycamore and Beech trees along the riverbank.

A major concern is the presence of Japanese Knotweed (*Falopia japonica*), a highly invasive non-native species that poses a serious threat to native biodiversity. This species was recorded growing on the left bank of the river, just downstream of the old creamery. Japanese Knotweed grows very vigorously and forms dense stands which shade out native vegetation. When it dies back in winter it leaves a bare bank which is then vulnerable to erosion. Recommendations for the management of Japanese Knotweed are included in the 3 Year Biodiversity Action Plan and we are pleased to see the progress that the Tidy Towns group has achieved in the last 3 years. The large stand of Knotweed seen in 2019 at the old Creamery riverbank site (see below) has been removed successfully. Well done!

Fig.7. Japanese Knotweed on riverbank near old creamery.

3.1.2 Stream FW1

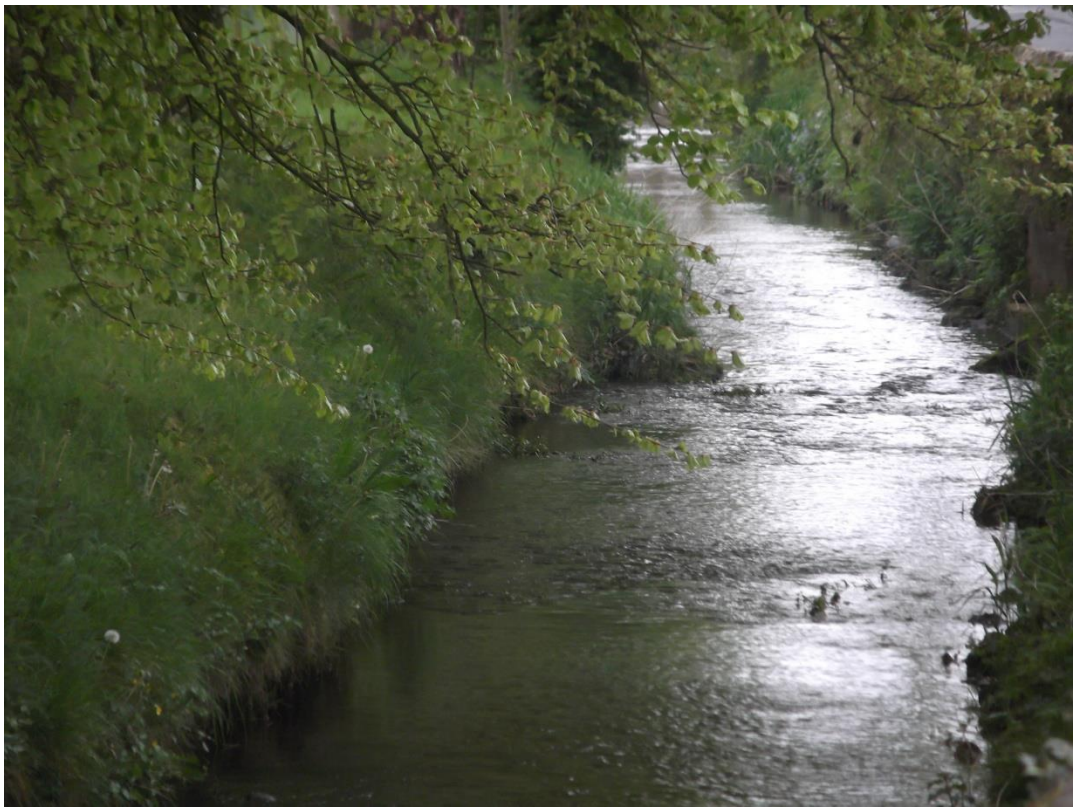

Fig.8. The stream flowing through Galbally village.

There is a small stream that flows alongside the Tipperary road through the village, before joining the River Aherlow. This stream rises in the hilly area to the north of Galbally and can be described as Upland/eroding river habitat FW1. This stream is typically fast flowing with a bed of small rocks and pebbles. The banks of the stream are modified in places by stone walls as it flows through the village. Wildflowers along the edge of the stream included Bush Vetch (*Vicia sepium*), Lesser Celandine (*Ranunculus ficaria*), Cow Parsley, Nettle (*Urtica dioica*) and Primrose (*Primula vulgaris).* Dippers are also a common sight along the stream.

The section of the stream near to where it joins the river Aherlow is more similar to the habitat of the river with Common Reed and Butterbur common along the banks. In summer this section of the stream can be clogged up with Common Reed, Butterbur and aquatic weeds such as Water Cress (*Rorippa nastutium-aquatica*) and Amphibious Bistort (*Persicaria amphibia*). We are pleased to see the progress the Tidy Towns group has made in controlling these weeds.

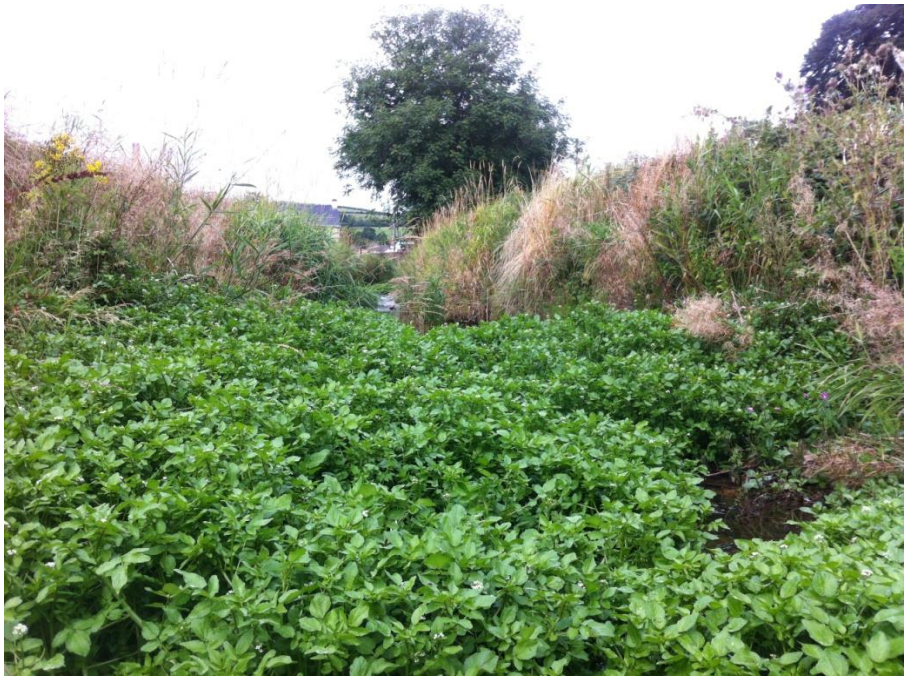

Fig. 9. Stream clogged with Water Cress and other aquatic plants.

3.2 Woods

3.2.1 Conifer Plantation WD4

On the Tipperary road there is a coniferous forestry plantation on the high ground to the left as you leave the village, just beyond the speed limit. This woodland has been planted for commercial purposes and consists of non native species such as

Sitka Spruce (*Picea sitchensis*), Lodgepole Pine (*Pinus contorta*) and Larch (*Larix sp.)*. These non native species do not support as much biodiversity as native woodlands and the fact that they are packed tightly together means that very little woodland flora exists due to lack of light.

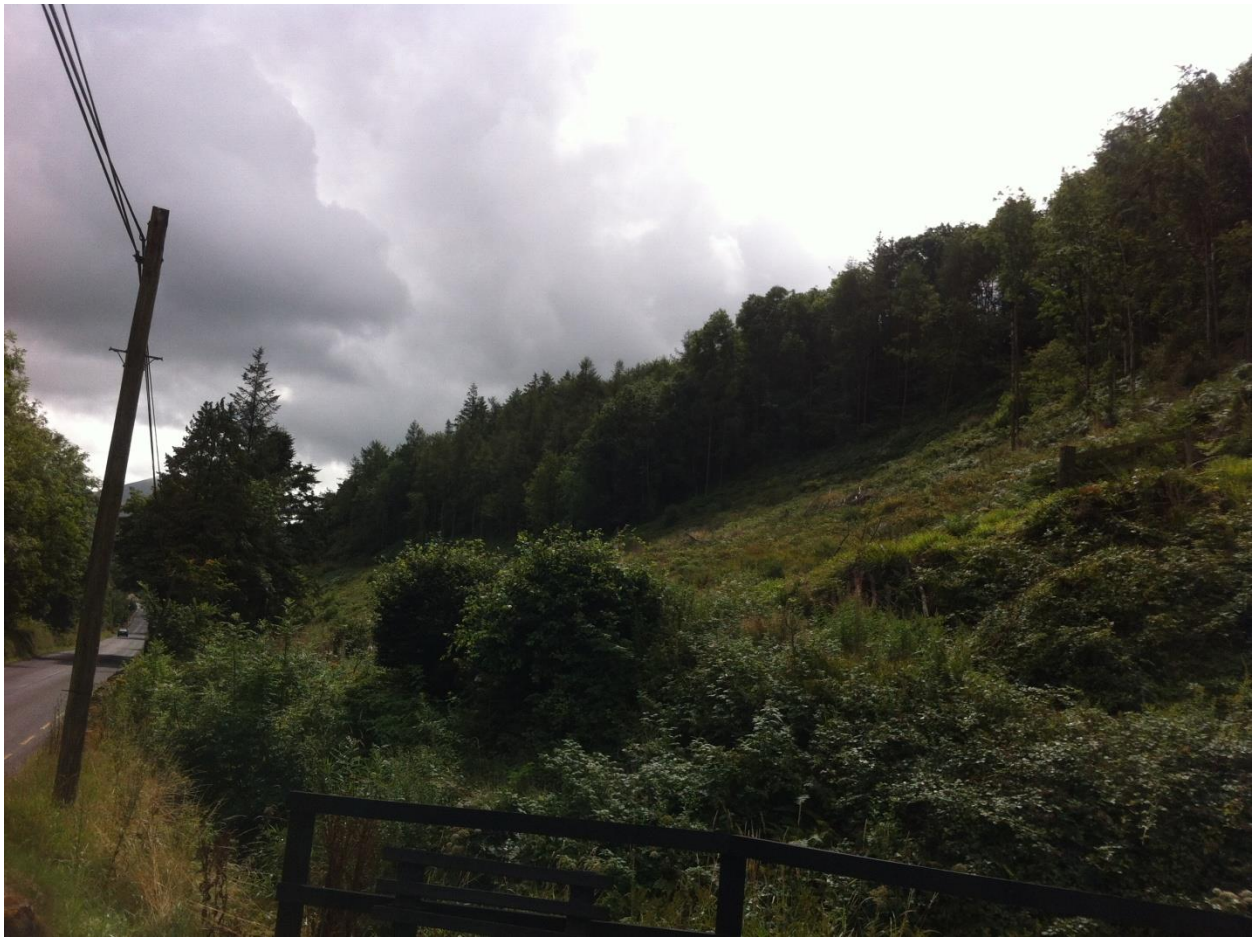

Fig. 10. Area of conifer plantation on hill, with scrub in the foreground.

While conifer plantations don`t support a great variety of flora and fauna, they do provide nesting habitat for Goldcrest (Regulus regulus) Sparrowhawk (Accipiter nisus), Coal Tit (*Parus ater*) and Magpie (Pica pica) which were all recorded. Foxes were also seen in this general area and conifer plantations do provide den sites for foxes.

3.2.2 Scrub WS1

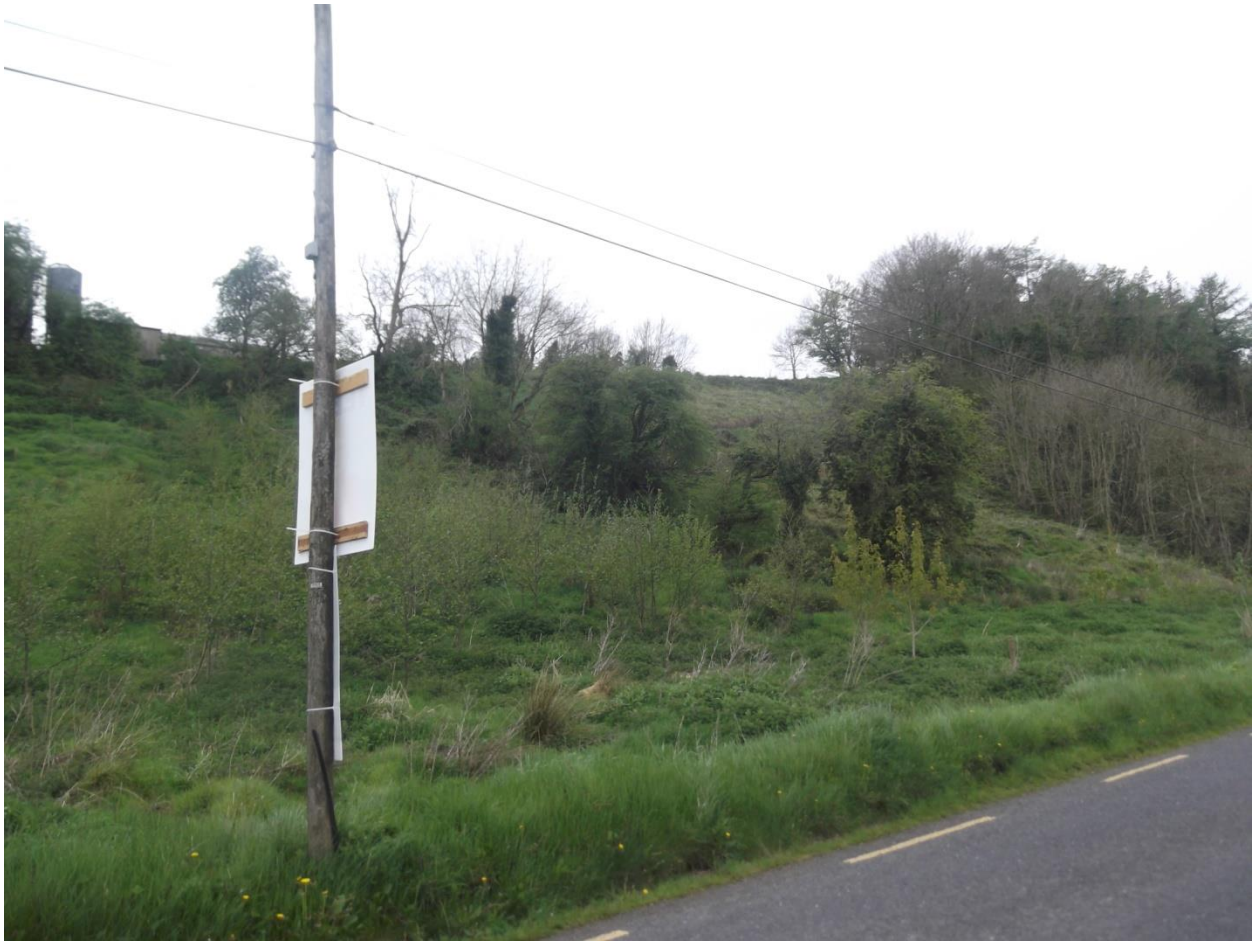

Fig.11. Scrub woodland on the Tipperary road.

In front of the conifer plantation on the Tipperary road is an area of Scrub. This area has been clearfelled in the past and is now reverting to scrub with some non

native trees also planted. Tree species recorded included native species such as Ash (*Fraxinus excelsior*) Willow (*Salix sp.)* Alder (*Alnus glutinosa*) Hawthorn (*Crateagus monogyna*) and Birch (*Betula sp*.) Non native species of trees included a number of Poplars (*Populus sp*.) as well as Sycamore (Acer pseudoplantanus). This woodland type supported a lot of wildflowers and shrubs including Rosebay Willowherb (*Epilobium angustifolium*) Foxglove (*Digitalis purpurea*) Lesser Celandine, Herb Robert (*Geranium robertianum*), Bramble (*Rubus fruiticosus*) and Honeysuckle (*Lonicera periclymenum*). Bluebells (Hyacinthoides non-scripta), Wood Sorrel (*Oxalsi acetocelis*) and Wood Anemone (Anemone nemerosa) also occur in places. Ferns and grasses such as Woodrush (*Luzula campestris*) were also recorded from this area.

Birds recorded included Chiffchaff (Phylloscopus collybita) Blackcap (Sylvia atricapilla) Willow Warbler (Phylloscopus trochilus), Reed Bunting (Emberiza schoeniclus), Kestrel (Falco tinnunculus) and Sparrowhawk. Mammals included Fox, Woodmouse (*Apodemus sylvaticus*) and Bank Vole (*Myodes glareolus*).

3.2.3 Riparian woodland WN6

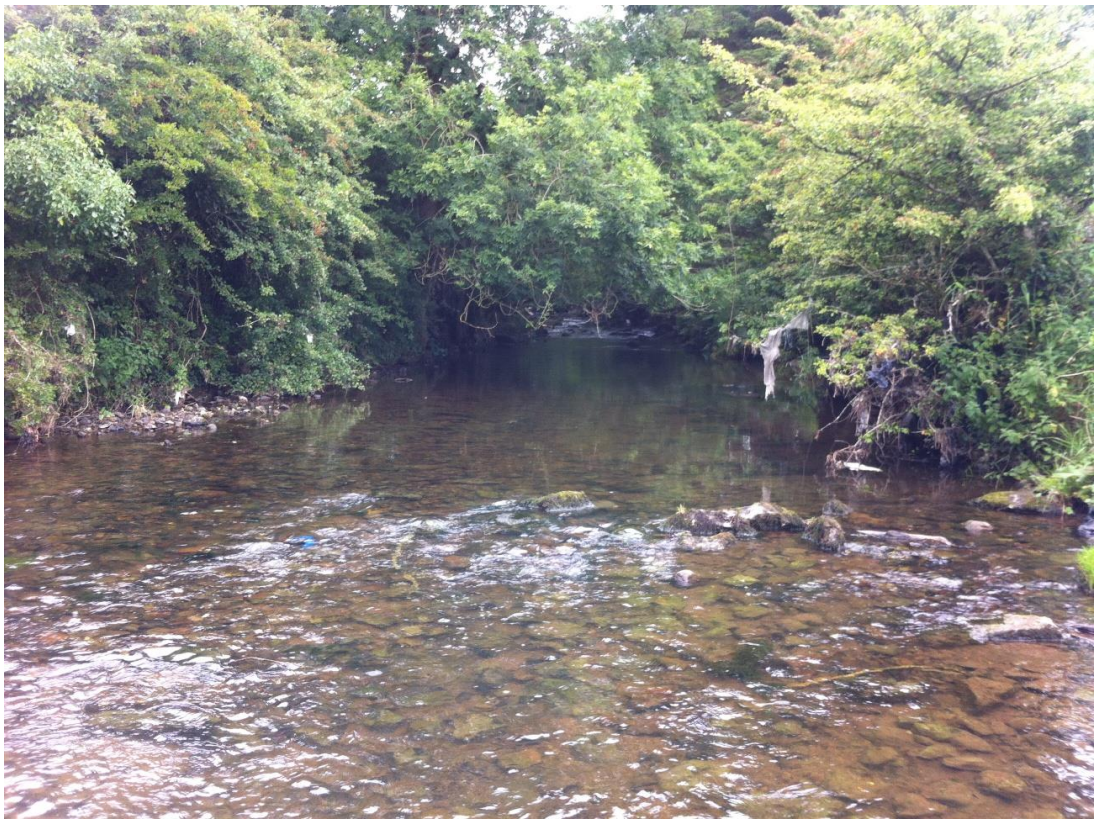

Fig. 12. Riparian woodland along the banks of the Aherlow.

Riparian woodland is woodland that is found alongside rivers and streams. I n Galbally this type of woodland occurs along stretches of the Aherlow River and on the Tipperary road alongside the Stream. Willow (Salix sp.) is the dominant tree species in this type of woodland with Alder and Ash also occurring. Much of this riparian woodland is absent from the banks of the river and there should be much more of this type of habitat. Riparian woodland provides a corridor for animals to move along the river as well as providing breeding sites for protected species such as Otter. A number of Otters were recorded along the Aherlow River and is a sign of a healthy river. Wildflowers recorded in this woodland type included Meadowsweet (*Filipendula ulmaria*), Water Mint (*Mentha aquatica*), Cuckoo flower (*Cardamine pratensis*) and Yellow-flag Iris (*Iris pseudacorus*).

There was a good number of bird species in these woodlands with Blackcap, Willow Warbler, Chiffchaff and Reed Bunting (*Emberiza schoeniclus*) recorded. Speckled Wood (*Pararge aegeria*) and Orange-Tip (*Anthocharis cardamines*) butterflies were also recorded.

3.2.4 Hedgerows WL1

Hedgerows are very important to wildlife, providing food, shelter and nest sites for a variety of species. Hedgerows act as a corridor linking isolated patches of woodland. They can be described as linear strips of woodland and typically contain a rich diversity of native flora and fauna.

Hedgerows occur on all of the approach roads to Galbally with good examples of hedgerows occurring on the Ballylanders/Limerick road, the school road, and the road to Moore Abbey. Beyond the speed limits there are some fine examples of hedgerows on all of the approach roads, as well as in the field boundaries in the surrounding farmland.

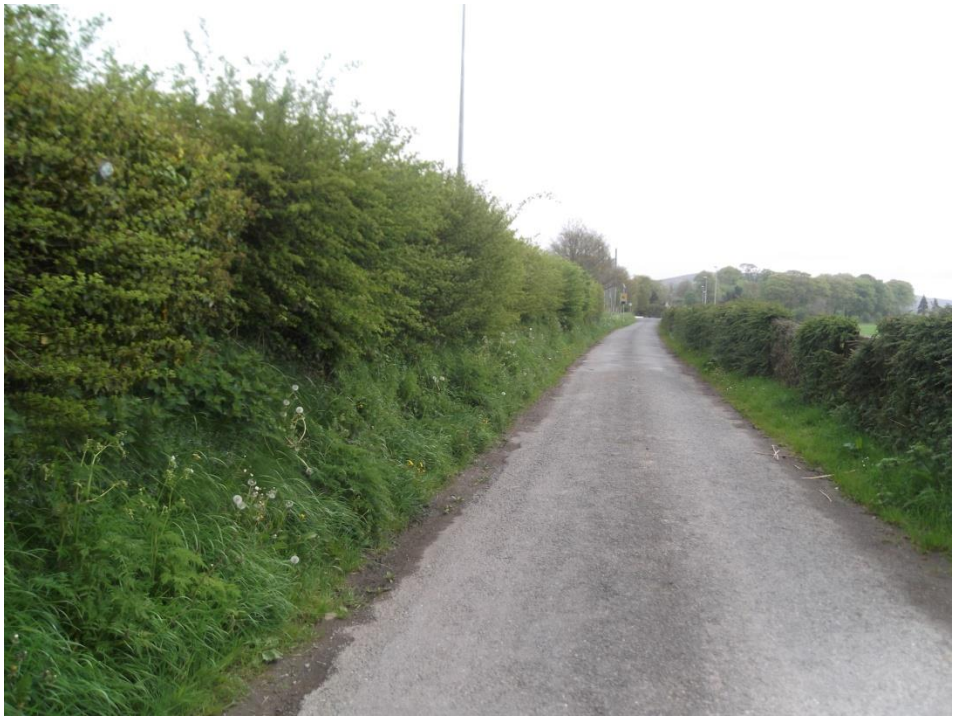

Fig.13. Hawthorn hedgerow on school road, back of rugby pitch.

Birds use hedgerows to roost and nest in and they are also important for bats, which use hedgerows to navigate between their roost sites and feeding grounds. Birds recorded in the hedgerows around Galbally included Blackbird (*Turdus merula),* Robin, Dunnock (*Prunella modularis*), Greenfinch (*Carduelis cloris*), Goldfinch (*Carduelis carduelis*) and Song Thrush (*Turdus philomelos*) as well as all the Tit species and numerous other species associated with hedgerows.

Butterflies and bees were common along the base of the hedgerows with species such as Small Tortoiseshell (*Algais urticae*), Orange-tip (*Anthocharis cardamines*) and Speckled Wood (*Pararge aegeria*) butterflies recorded. Hoverflies and Bumblebees were also common, particularly on plants such as Tufted Vetch (*Vicia cracca*) and Cow Parsley. Hawthorn was the dominant tree species in the hedgerows with Ash, Elder, Hazel, Blackthorn (*Prunus spinosa*), Sycamore and Gorse (*Ulex sp*.) also occurring.

Hedgerows also act as a refuge for woodland species. For example, herbs growing at their base include typical woodland plants such as Primrose, Herb Robert (*Geranium robertianum*), and Buttercups (*Ranunculus acris* and *R. bulbosus*). Cow Parsley is also common along the base of the hedgerows on all approach roads and Lesser Celandine covers the grassy ditches beneath the hedgerows during spring.

Fig. 14. Common carder Bumblebee onTufted Vetch at base of hedgerow beyond the school.

Mammals recorded in and along the Hedgerows included Woodmouse, Hedgehog, Bank Vole and Pipistrelle Bat which was identified using a bat detector. An active badger sett was also recorded in a hedgerow in adjacent farmland. The exact location of the Badger sett will remain confidential as Badgers are being persecuted at the moment, both legally and illegally.

3.2.5 Treelines

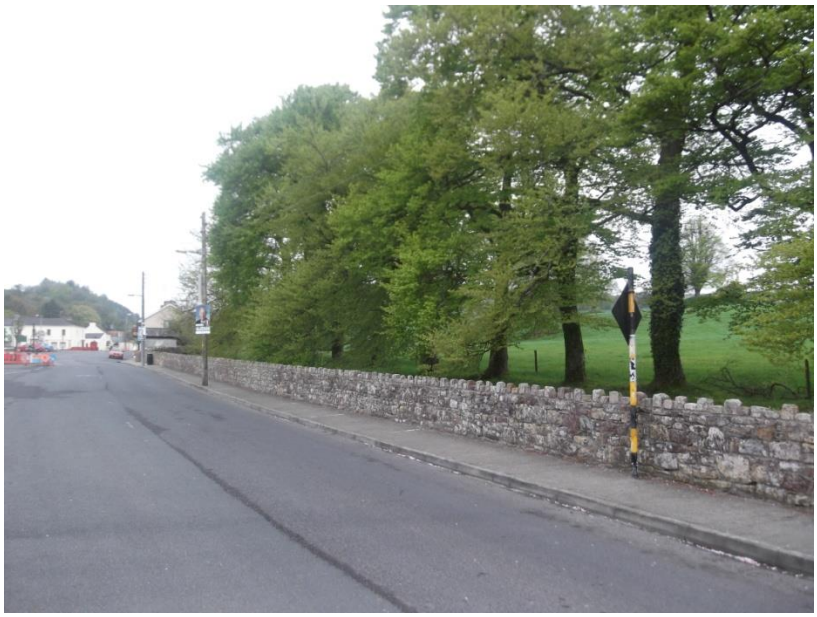

Fig. 15. Line of Beech trees on road to Moore Abbey.

A tree line is defined as a narrow row or single line of trees that is greater than 5m in height. Treelines occur along lots of the field boundaries surrounding the village and include species such as Ash, Sycamore, Beech (Fagus sylvatica) and a variety of conifers such as Sitka Spruce. Within the village the main treeline occurs along the road to Moore Abbey .The trees along the stream opposite the library are Beech trees, further along the road heading towards the abbey, Sycamore, Ash and Oak (*Quercus sp*.) also occur.

Treelines also act as a corridor for wildlife, as well providing nest sites for birds such as Rook (*Corvus frugilegus*) Magpie (Pica pica) and Mistle Thrush (*Turdus viscivorus*). Rooks nest in the line of Beech trees along the stream.

3.3 Stone Walls and other stonework BL1

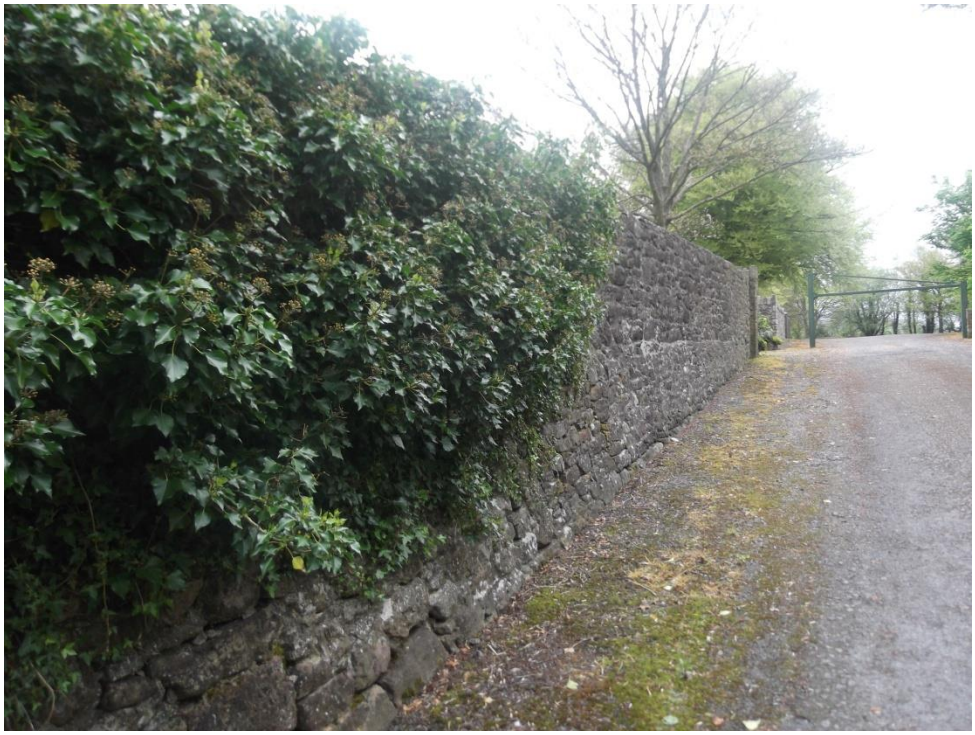

Fig.16 Stone wall along the entrance road to graveyard.

This habitat type includes stone walls and other stone structures such as stone bridges and ruins. In Galbally there is a good network of stone walls, a number of stone bridges and two notable stone ruins in Moore Abbey, and the ruins of a 13th century church in the graveyard.

The importance of stone walls as a potential habitat and wildlife corridor is often overlooked. Old stone walls can accommodate flowers, lichens, mosses, ferns, insects, birds and small mammals. Insects, birds and small mammals use walls to nest, roost and feed, whether in gaps or in vegetation growing on the wall e.g. Wren (*Troglodytes troglodytes*), Robin (*Erithacus rubecula*), Dunnock (*Prunella modularis*), Wood Mouse (*Apodemus sylvaticus*) and even Stoat (*Mustela erminea).*

Fig. 17. Ivy-leaved Toadflax on stone wall along stream.

The majority of the stone walls in Galbally can be found along the Glen of Aherlow road and includes the wall bordering the stream. Stone walls can also be found along the entrance to the graveyard and the graveyard itself. Flower species recorded on the walls included Red Valerian (*Centranthus ruber*), Herb Robert (*Geranium robertianum*), Navelwort (*Umbilicus rupestris),* White Stonecrop (*Sedum album),* Ox-eye Daisy (*Leucanthemum vulgare)* and Ivy-leaved Toadflax (*Cymbalaria mularis*).

The stone walls also support a variety of ferns such as Rusty-back Fern (*Ceterach officinarum*), Maidenhair Spleenwort (Asplenium trichomanes) and Wall-Rue (*Asplenium ruta-mularia*). Ivy (*Hedera helix*) also grows on the walls and is a source of pollen and nectar for honeybees and other insects in the autumn months when it flowers. Ivy also provides shelter and nest sites for birds such as Robin and Wren.

Fig.18. Maidenhair Spleenwort on wall approaching Graveyard.

Within the graveyard are the ruins of a 13th Century church, this ruin is covered in Ivy and supports a number of breeding bird species including Jackdaw (*Corvus monedula*), Starling (*Sturnus vulgaris*) and Wren (*Troglodytes troglodytes*). Bumblebees, Hoverflies and wasps were also common on the wall flowers and ivy.

Fig. 20. Ivy covered church ruin in the graveyard

The stone bridges around the village also support a good diversity of flowers, ferns, mosses and lichens. Moore Abbey has plenty of holes and crevices and is being used by Jackdaws and Starlings for nest sites. Pipistrelle bats have also been recorded emerging at dusk from the abbey.

3.4 Amenity Grasslands GA2

This type of grassland is improved or species poor and is managed for purposes other than grass production. In Galbally this type of habitat can be found in the playing fields of the local GAA and rugby clubs and the community park. These areas are typically species poor and are mown regularly to ensure a short sward of grass. Daisy (*Bellis perennis*), Dandelion (*Taraxacum officinale*), Clovers and Plantains were the commonest flowers in these grasslands but a variety of other flora and fauna was also recorded. The two main areas of amenity grasslands have been described separately to get a better idea of the wildlife in this broad habitat type.

GAA and Rugby Pitches

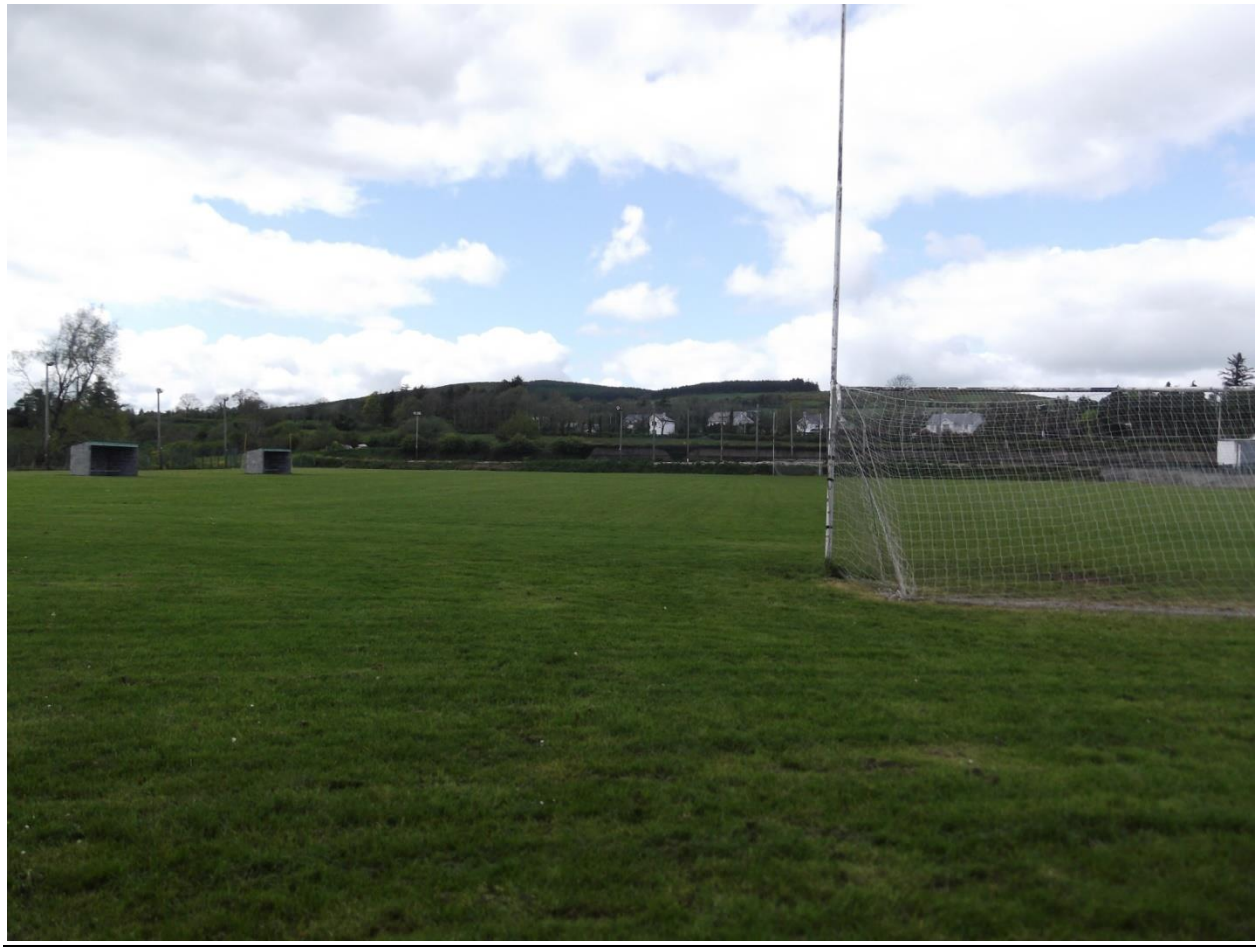

Fig.21 .Amenity grassland of the GAA pitch.

The playing pitches of the GAA and Rugby clubs are regularly mown and do not support a great diversity of flora. The areas around the perimeter of the GAA pitch are less mown and managed and support a greater variety of wildflowers including Ox-eye Daisy, Hawkbit, Common Horsetail, and Tufted Vetch among other species. There are a few trees on the riverside boundary such as Willow and Ash. The roadside boundary ditch of the GAA pitch has been planted with Cotoneaster, this is a very popular plant for bees and butterflies. Behind the goals of the GAA pitch on the Limerick Road is a grassy embankment.

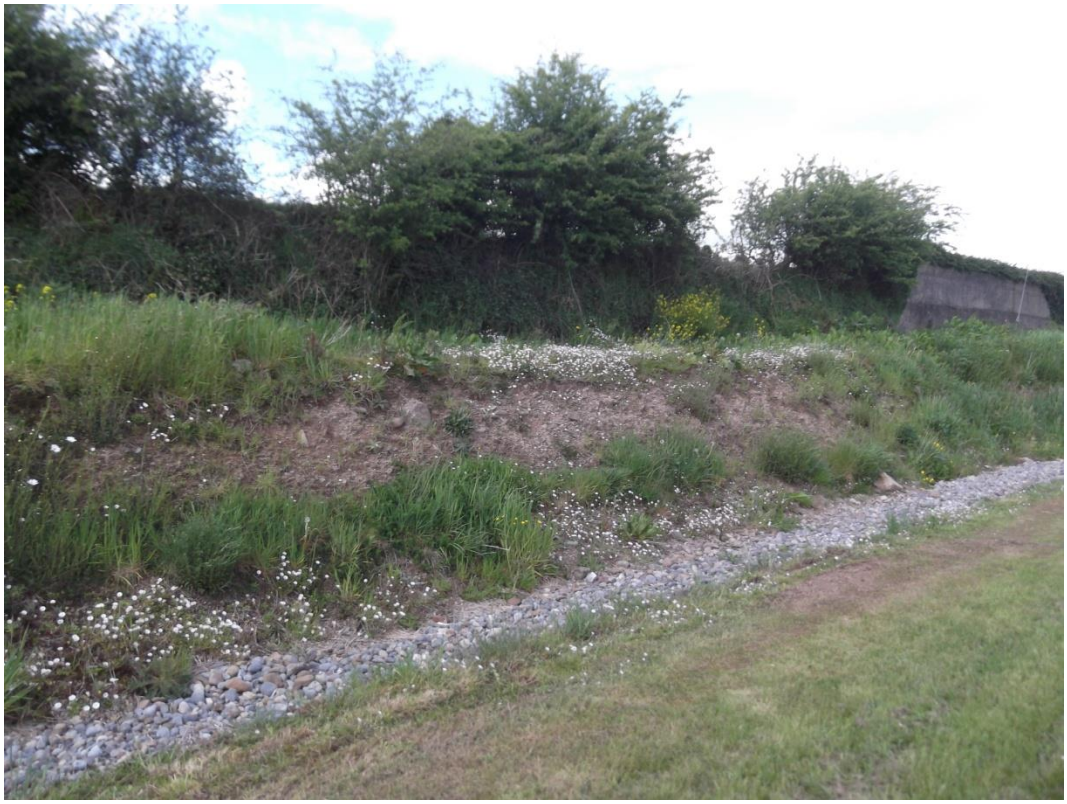

Fig. 23. Grassy embankment behind GAA goals.

This embankment was full of Daisy, Germander Speedwell. Hawkbit, Herb Robert and Rape. Bumblebees and butterflies such as Orange-Tip, Small Tortoiseshell and Peacock were recorded. The opposite boundary ditch was just a bare grassy ditch with a line of Alder trees inside it. The cones of these Alder trees are eaten by Siskins and Redpolls during the winter.

The playing area of the rugby pitch was similar to the GAA pitch with few floral species, however the school road boundary ditch was composed of a thick hawthorn hedge which provides nest sites for birds such as Blackbird, Song Thrush and Robin.

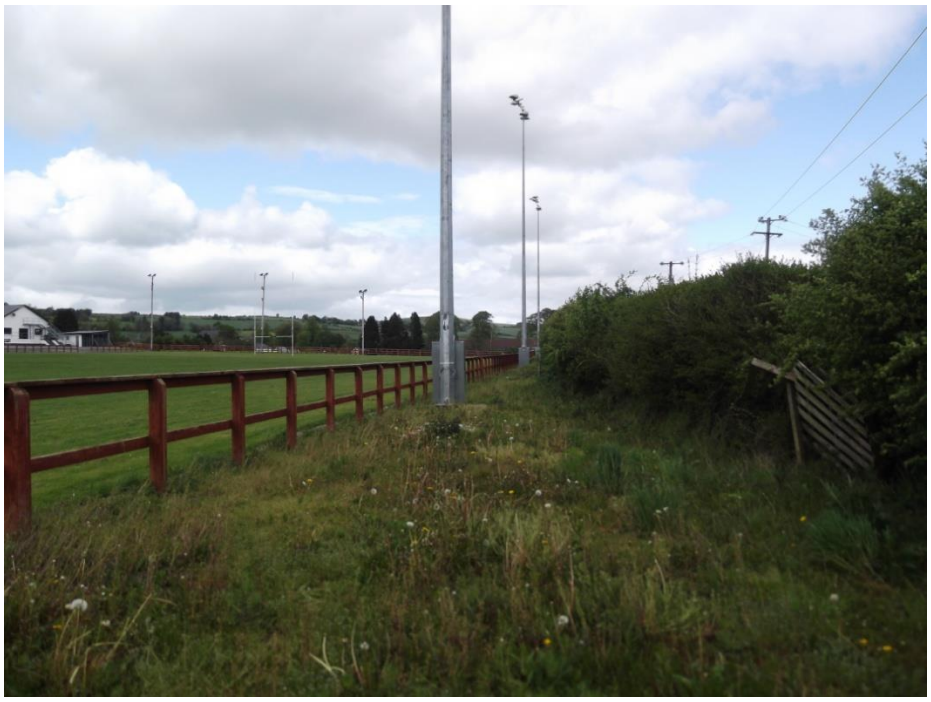

Fig.23 Hawthorn edge and grassy strip. At school side of rugby pitch.

There was also a grassy verge along the side perimeter of the rugby pitch which supported a lot of wildflower species such as Herb Robert, Ox-eye Daisy. Germander Speedwell, Birds-foot Trefoil (*Lotus corniculatus*) and many others. This rough area of grassland provides seed for birds such as Goldfinch (*Carduelis carduelis*), Greenfinch (*Carduelid chloris*) and Chaffinch (*Fringilla coelebs*). Swallows (*Hirundo rustica*) and House Martins (*Delichon urbicum*) can be seen flying low over the open grassy pitches during the summer months, while Pied Wagtails, Blackbirds and Thrushes are also common. In winter, Redwing (*Turdus iliacus*) and Fieldfare (*Turdus pilaris*) feed on the open grassy areas.

Community Park

The community park was very similar to the playing pitches with a regularly mown grass sward supporting very few plant species. Hawthorn hedge and other trees

around some of the perimeter provide nesting habitat for Blackbird and Song Thrush. Swallows and House Martins can be seen flying over the open grassy areas during the summer. There is a fine hedgerow forming the boundary with the national school, this hedgerow is a mixture of Hawthorn and Privet and offers valuable nest sites for small mammals and song birds such as Robin, Wren, Blackbird and Song Thrush.

Butterflies and bees are a common sight on warm sunny days in the nearby Irish Wildflower area. This area has been planted with native Irish wildflowers, sourced locally that are representative of indigenous native wildflowers common in the locality. Some of the wildflowers planted include Corncockle (*Agrostis githago*), Meadow Vetchling (*Lathyrus pratensis*) Fleabane (*Pulicaria dysenterica*) and Cowslip (*Primula veris*).

An information sign depicting the native wildflowers has been erected outside the Irish Wildflower area.

Fig.24. Buff-tailed Bumblebee In Irish Wildflower area

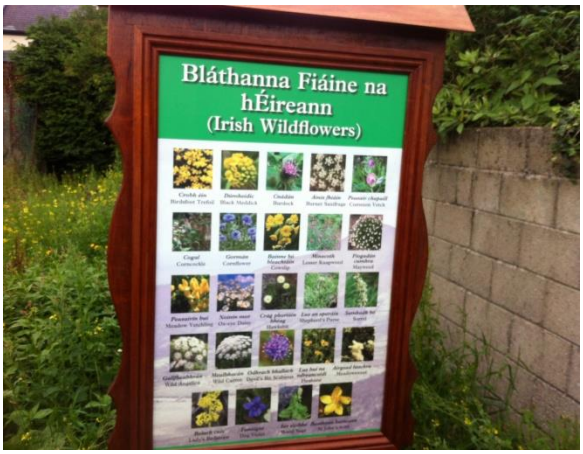

Fig. 25 Irish wildflower area and information sign.

3.5 Urban Areas- Buildings and Artificial Surfaces BL3

Urban areas can support a surprising variety of wildlife, with birds and bats nesting in buildings and wildflowers allowed to grow in derelict sites and waste ground. In Galbally there are a number of buildings in the town that provide habitat for a diverse range of species including protected species such as bats.

The community centre building next to the community park provides nest sites for Swifts (*Apus apus*) during the summer months, as there are cracks and crevices that allow Swifts gain access to the roof space. Swifts are a summer migrant from Africa and their screaming calls can be heard throughout the summer as they whirl about in the skies over the village

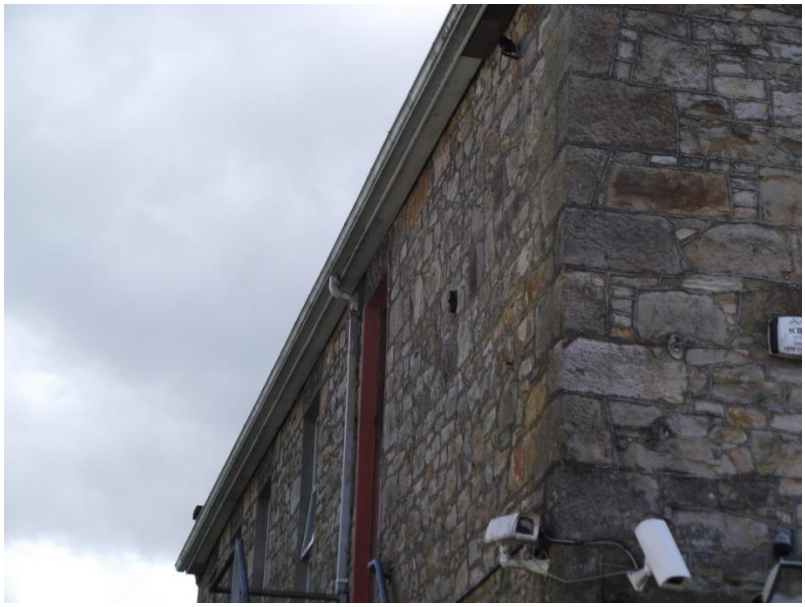

Fig.24. Community Center, Swifts can enter roof space under eaves.

There are a number of buildings throughout the village that also provide nest sites for a number of birds including Starling, Swallow, House Martin and House Sparrow. House Martins nest under the eaves of the church and community center as well as gable ends of a number of houses. House Martins are very similar to Swallows but they can be distinguished from Swallows by their white rumps and

short forked tail. They also differ from Swallows in their choice of nest site, preferring to nest on the outside of buildings and never inside a building.

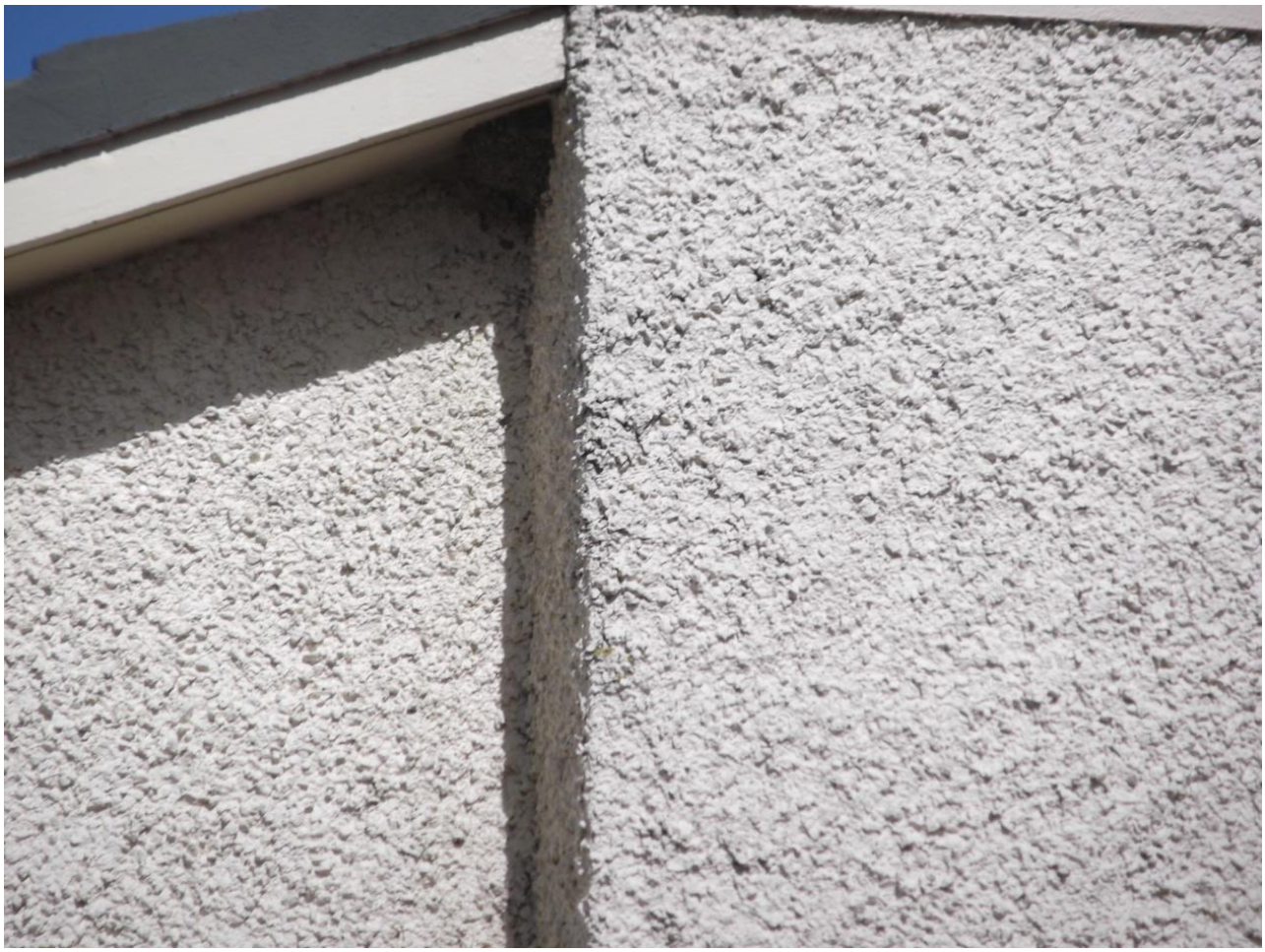

Fig. 26 House Martin nest under the eaves of the church.

3.6Gardens

3.6.1Ornamental/non-native shrub WS3

Fig.27. House with Cherry blossom and shrubs in front garden

This type of habitat occurs throughout Galbally in locations such as gardens of houses and landscaped areas such as the school and church grounds. The houses on the Tipperary road, Glen of Aherlow road, and the school grounds are a good example of this type of habitat .Many houses have front and back gardens with a lot of ornamental shrubs. This type of habitat can be overlooked but gardens can provide nest sites for a number of bird species including Blackbird, Robin, Dunnock and Song Thrush. The shrubs in these gardens are mostly non native but some do provide nectar and pollen for insects. Buddleia (*Buddleja davidii*) also known as the Butterfly bush is very popular with bees and butterflies. Other shrubs such as Cotoneaster (*Cotoneaster spp.*) produce berries that are eaten by Blackbirds and Thrushes, while native shrubs such as Holly (Ilex aquifolium) produce berries that are eaten by Redwings and Fieldfares in winter.

4.0. 3 Year Biodiversity Action Plan

Following the identification of habitats and associated flora and fauna, a number of recommendations are made for Galbally Tidy Town`s which are outlined in the 3 Year Biodiversity Action Plan. These recommendations will provide Galbally Tidy Town with a strategic plan to achieve their aims and objectives for wildlife and natural amenities in Galbally.

Some of the recommendations for projects have already been implemented by Galbally Tidy Town and most of these will be ongoing throughout the 3 year period. The following projects and recommendations are made:

4.1. Control of non native species.

Non native species pose a serious threat to native biodiversity. There are a number of non native species in Galbally which have to potential to cause serious damage to native species. These include Mink and Japanese Knotweed.

Mink Trapping

It is recommended that a programme of Mink trapping be implemented along the river Aherlow in particular, as Mink were recorded along the river. There was a lack of typical waterbird species such as Moorhen along the river and predation by Mink is the probable cause. It is recommended that Mink trapping should continue over the next 3 years. The numbers of Mink trapped should be recorded and monitored and the frequency of trapping can be varied depending on numbers trapped.

Japanese Knotweed Management

Japanese Knotweed poses a serious threat to native flora and fauna. It grows vigorously and outcompetes native plants. Japanese knotweed forms tall thickets

that exclude all other vegetation, shading the area below. Native plants can rarely compete with this invasive species and local plant biodiversity is reduced.

Japanese knotweed can also seriously damage buildings, hard surfaces and infrastructure in some cases. Once established underneath or around the built environment, it can be particularly hard to control, in some cases growing through concrete and tarmac and other areas of hard-standing. When Japanese knotweed colonises riverbanks, it can damage flood defense structures and reduce the capacity of channels to carry flood water.

The following provides a summary of the key impacts of the species:

- Excludes native species;
- Dies back in winter leaving river banks vulnerable to erosion;
- Subsequent potential sedimentation impact on fish spawning areas;
- In cases it can damage building foundations;
- Collects litter in urban areas; and
- Can damage hard surfaces by growing through them.

Japanese Knotweed is not spread by seed even though it does flower; the principal method of dispersal is vegetatively, from cut stems or fragments of rhizome. It is therefore vitally important not to cut or strim patches of Japanese Knotweed as this only spreads it. A 3 year management plan for Japanese Knotweed is recommended which will include:

Year 1

Mapping the locations of Japanese Knotweed in Galbally and particularly along the banks of the river where it is present. This work has already been carried out by Galbally Tidy Town members, and the locations of Japanese Knotweed along the River Aherlow have been mapped. An eradication programme commencing in year

2 has been agreed upon following consultation with Tony Kenneally and is still in progress.

Year 2

Begin a programme of eradication. The best method of eradication is by use of herbicides such as round-up. Round-up can be injected into the stems in sensitive areas, such as along the river bank, or blanket sprayed in more secure areas. It is recommended that consultation should take place with Limerick County Council who may be able to provide support. It is also recommended to contact an ecologist or suitably qualified person before any eradication programme is begun.

A good website for further information is:

http://invasivespeciesireland.com/toolkit/invasive-plant-management/terrestrial-plants/japanese-knotweed/

Year 3

Monitor areas that have been treated for re-growth and re-treat as necessary.

The eradication of Japanese Knotweed is a huge project and will require all sectors of the community to participate if it is going to succeed. However it is a project that is well worth embarking on as the problem will only get worse if not tackled.

Note: The eradication of non native invasive species highlighted above is a long term project and will not necessarily be completed after 3 years.

4.2 Bird and Bat boxes

A number of bird boxes have been made and have been located in suitable locations. These include boxes for Tits and Sparrows as well as nest pipes for Dipper. It is also recommended that a number of bird boxes should be given to the

local national schools as there are suitable locations around the national schools for Tit and Sparrow boxes.

Fig. 28 A House Sparrow nest box on the wall of the library.

A class project could include monitoring the nest box and recording which boxes were used, when nesting began and how many chicks fledged. This would help raise awareness among the school children of some of our native bird species.

Bat boxes could be made and sited in trees and buildings along the riverbank. The erection of bird and bat boxes would increase the availability of roost and nest sites for bats and birds. Dipper nest pipes have been installed under the bridges along the stream, and it is recommended that further nest pipes be installed under the bridges of the River Aherlow around Galbally.

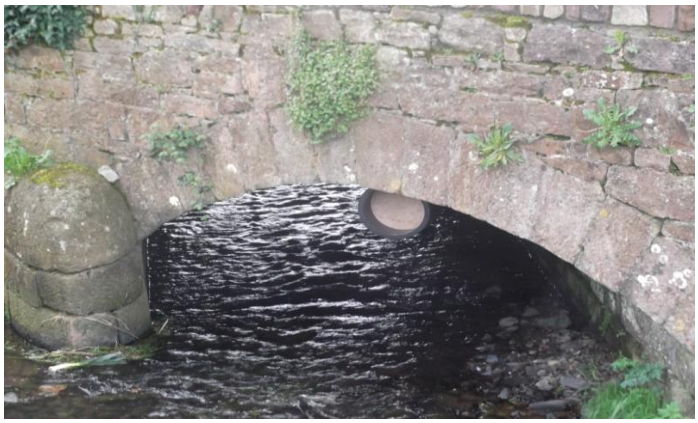

Fig. 29 Dipper nest pipe under the bridge on road to graveyard.

4.3. Raising Biodiversity awareness in schools

The local school should be the first stop in promoting an awareness of nature and biodiversity. Biodiversity talks have been given to the local national school on native birds and animals by Wildlife Biologist Tony Kenneally and further talks are planned throughout the year. Some other ways of raising school children`s awareness of biodiversity include:

- Bringing in a wildlife expert to give seasonal talks on nature topics-4 times a year maybe.
- Putting up bird boxes and bird feeders around the school and getting the school to participate in the Winter Garden Bird Survey for schools, run by Birdwatch Ireland.
- Getting the schoolchildren involved in seasonal surveys such as Frog survey and Butterfly survey.

The results of these surveys should be kept and sent to the relevant conservation organisations. There are a number of school projects that could be developed from such surveys.

4.4 Raising awareness in the local community

Raising awareness in the local community about the wildlife in Galbally is also very important for wildlife and habitat conservation. If people are not aware of what wildlife and habitats exist in Galbally, then they are less likely to appreciate them. The following recommendations are made to achieve this:

- Develop a put up a number of wildlife information signs around the town. A wildlife sign should definitely be put up near the bridge highlighting the wildlife associated with the river.
- Organise a number of nature walks throughout the year including Bat walks, Dawn Chorus walks and Tree walks.

- Develop a facebook page specifically for wildlife, where people can report wildlife sightings and post photos. Keep a record of all wildlife sightings and submit to the National Biodiversity Data Centre.

- Organise environmental summer camps for kids during the summer holidays.

4.5 Sensitive management of existing habitats

Stone Walls and ruins

The network of stone walls is a valuable habitat for wildlife in Galbally and should be managed appropriately.

- Walls should never be sprayed with herbicides, either on the wall or at the base of the wall.
- Ivy should be left grow and trimmed back where necessary, rather than removed totally.
- Do not use concrete to repoint walls if it was not originally used and do not remove render.

- The ivy on the ruins of the church in the graveyard should never be removed as this could destabilize the entire structure. If necessary trim back.

River bank

- Vegetation on the riverbank should be allowed to grow naturally. The best management practice for the riverbanks is to let nature take its course.
- There are a number of farms bordering the river where vegetation has been removed and cattle have been allowed access the river. This can lead to pollution of the river and a reduction in water quality. A buffer of vegetation along the river bank would help reduce pollution runoff into the river. This issue is best tackled through consultation with local landowners.
- The bank of the river next to the GAA pitch should be planted with Alder trees sourced locally, this would help stabilize the bank which is lacking in vegetation cover, particularly trees. A line of trees at this end of the GAA pitch would also provide shelter from the wind.

Hedgerows

There are a number of hedgerows on the approach roads to Galbally and within the village. These provide valuable wildlife habitat for a range of native flora and fauna and should be properly maintained. The following recommendations are made to maintain existing hedgerows and increase this type of habitat.

- Under the Wildlife Act (1976) and the Wildlife Ammendment Act (2000) it is illegal to cut hedgerows between 01st March - 31st August. This goes some way to protecting nesting birds and mammals. However illegal hedge cutting

often takes place during this period and should be reported to the local NPWS ranger.

- The base of hedgerows should be allowed to grow naturally and herbicides and insecticides should not be used. Galbally Tidy Towns are actively involved with local landowners, clubs and organizations within the village to restrict the use of herbicides and insecticides. This engagement with the local community is very encouraging and helps raise awareness of the value of hedgerows to wildlife.

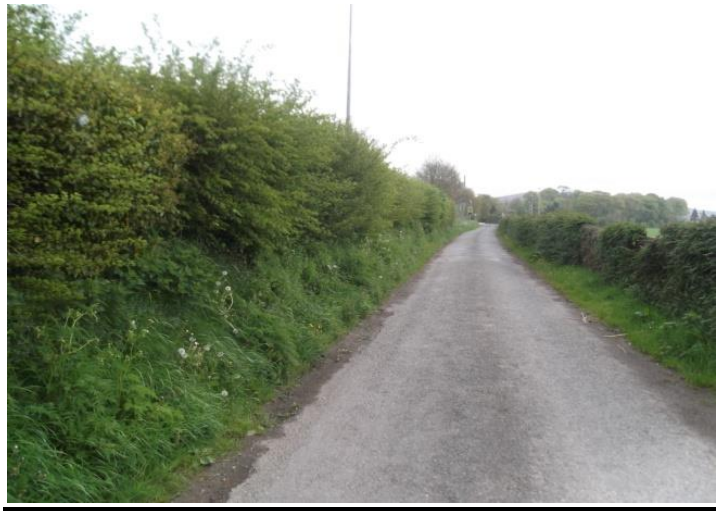

Fig.30 Hedgerow just beyond the school.

- There are sections of grassy ditches on the approach roads that could be planted with Hawthorn and other native species acquired from local sources. would increase the biodiversity value of the grassy ditches providing food, shelter and nest sites for a range of birds, insects and mammals. Roads with sections of bare grassy ditches include the school road at the back of the GAA pitch, the Tipperary road and the Limerick road.

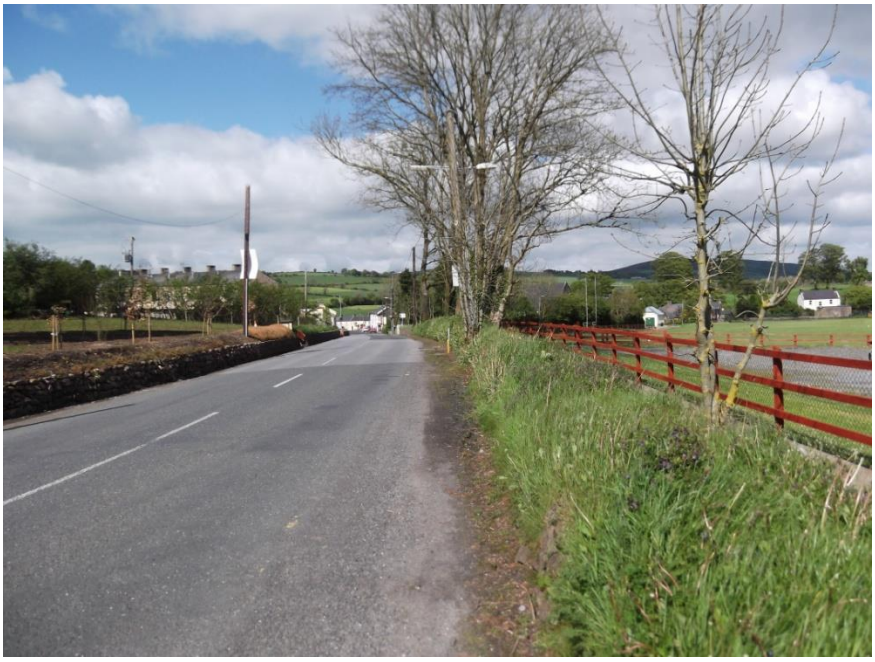

Fig.32 Bare grassy ditch on the Limerick road

Amenity grassland

The grassland of the GAA and Rugby pitches support very few species of flora, however there are grassy margins and embankments around the perimeter of these pitches which could be left grow a little wild and maybe cut once or twice a year. A native hedgerow could also be planted between the Rugby and GAA pitches.

The community park is a large open grassy area that s regularly mown. It has some hedgerows around its perimeter that increase its biodiversity value. The native Irish wildflowers that have been planted also help increase the biodiversity value of the park. The park itself is very open and could be made more wildlife friendly through the following measures:

- Plant pockets of native shrubs and trees within the open area.

- Allow an area of grassland to grow into a wildflower meadow. This area should only be mown a few times during the year to allow wildflowers to establish naturally. It is surprising the amount of wildflowers that can be present in these areas.
- A regularly mown strip could be maintained around the perimeter to show that this was a deliberate management plan.

4.6 Galbally Ecological Park

I note the great work done by the Tidy Towns group in procuring 3.75 acres of land for the new Galbally Ecological Park. The plan that the group have commissioned from their Expert Ecologist is to be lauded. I look forward to seeing the outcome of this plan over the coming years.

Appendix 1

Species list for each habitat.

River Aherlow

Mammals

Otter, Mink, Daubentons Bat, Pipistrelle Bat.

Birds

Grey Heron, Grey Wagtail, Dipper, Sedge Warbler, Moorhen, Kingfisher, Mallard, Siskin, Redpoll, Swallow, House Martin, Sand Martin, Reed Bunting.

Flowers, grasses and sedges

Marsh Marigold, Meadowsweet, Yellow-flag Iris, Ragwort, Stitchwort, Germander Speedweel, Rape, Angelica, Hogweed, Common Reed, Common club-rush, Crow –foot round leaved, Water Mint, Bistort, Cuckoo Flower, Creeping Forget me not, Water forget me-not, Japanese Knotweed, Purple Loosestrife, Rosebay Willowherb, Sneezewort, Valerian, Water Cress.

Insects

Dragonflies

Brown Hawker, Common Hawker, Emperor, Four spotted chaser.

Damselflies

Beautiful Demoiselle, Banded Demoiselle.

Butterflies

Orange Tip, Large White, Small White, Peacock.

Bumblebees

Buff -tailed bumblebee, White-tailed bumblebee, Red-tailed bumblebee, Carder Bee

Fish

Salmon, Brown Trout, , 9-Spined Stickleback, White-clawed Crayfish.

Trees

Alder, Willow, Ash, Sycamore, Dogwood, Horse Chestnut, Beech, Oak.

Stone Walls and ruins

Mammals

Stoat, Wood Mouse, Bank Vole, Pipistrelle Bat,

Birds

Blackbird, Robin, Song Thrush, Dunnock, Wren, Blue Tit, Great Tit, Starling, Jackdaw.

Flowers

Herb Robert, Navelwort, White Stonecrop, Ox-eye Daisy, Ivy-leaved Toadflax, Ivy.

Ferns

Rusty-back Fern, Maidenhair Spleenwort, Wall-Rue.

Woodland

Mammals

Fox, Badger, Pine Marten, Stoat, Wood Mouse, Bank Vole, Pipistrelle Bat, Pygmy Shrew, Hedgehog.

Birds

Blackbird, Robin, Song Thrush, Mistle Thrush, Treecreeper, Dunnock, Chaffinch, Goldcrest, Long-tailed Tit, Blue Tit, Coal Tit, Great Tit, Wren, Sparrowhawk, Greenfinch, Bullfinch, Goldfinch, Chiffchaff, Willow Warbler, Blackcap, Siskin, Redpoll,

Flowers

Bluebell, Wild Garlic, Primrose, Lords and ladies, Lesser Celandine, Wood Sorrel, Wood Anemone, Pignut, Foxglove, Honeysuckle, Tufted Vetch, Bush Vetch, Self Heal, Dog Violet, Wood Rush.

Trees

Oak, Ash, Silver Birch, Downy Birch, Lime, Horse Chestnut, Larch, Beech, Sweet Chestnut, Alder, Willow, Elder, Hawthorn, Blackthorn, Sycamore, Mountain Ash, Cherry Laurel, Holly.

Butterflies

Speckled Wood.

Hedgerows

Mammals

Fox, Badger, Stoat, Wood Mouse, Bank Vole, Pipistrelle Bat, Pygmy Shrew.

Birds

Blackbird, Robin, Song Thrush, Mistle Thrush, Dunnock, Chaffinch, Goldcrest, Long-tailed Tit, Blue Tit, Coal Tit, Great Tit, Wren, Sparrowhawk, Greenfinch, Bullfinch, Goldfinch, Chiffchaff, Willow Warbler, Blackcap, Barn Owl.

Flowers

Bluebell, Wild Garlic, Primrose, Lords and ladies, Lesser Celandine, Wood Sorrel, Wood Anemone, Pignut, Foxglove, Honeysuckle, Meadow Vetchling, Tufted Vetch, Bush Vetch, Self Heal, Dog Violet, Cow Parsley, Herb Robert, Buttercups, Nettle, Ragwort.

Trees

Hawthorn, Blackthorn, Elder, Sycamore, Ash, Mountain Ash, Cherry Laurel.

Butterflies

Speckled Wood, Orange Tip, Small Tortoiseshell, Small White, Large White, Peacock.

Amenity Grassland

Mammals

Fox, Badger, Wood Mouse, Bank Vole.

Birds

Blackbird, Robin, Song Thrush, Mistle Thrush, Dunnock, Chaffinch, Pied Wagtail, House Sparrow, Swallow, House Martin, Rook, Hooded Crow, Jackdaw, Magpie, Kestrel, Pheasant, Starling, Redwing, Fieldfare.

Flowers

Primrose, Red Clover, White Clover, Lesser Celandine, Self Heal, Dog Violet, Rape, Plantain, Birds-foot Trefoil, Daisy, Thistle, Cuckoo Flower, Dandelion, Docks, Creeping Buttercup.

Trees

Ash, Silver Birch, Downy Birch, Beech, Alder, Willow, Elder, Hawthorn, Blackthorn, Sycamore, Mountain Ash.

Butterflies

Speckled Wood, Small Tortoiseshell, Small White, Large White, Meadow Brown, Ringlet.

Buildings and artificial surfaces

Mammals

Wood Mouse, House Mouse, Bank Vole, Pipistrelle Bat.

Birds

Starling, House Sparrow, Swift, Swallow, House Martin, Blue Tit, Great Tit, Jackdaw.

Flowers

Herb Robert, Self Heal, Germander Speedwell, Japanese Knotweed, Dandelion, Daisy, Ox-eye Daisy, Ragwort, Plantain, Dock, Japanese Knotweed.

Trees

Elder, Sycamore, Ash, Willow.

Butterflies

Small White, Small Tortoiseshell, Orange Tip.

Gardens

Mammals

Wood Mouse, Bank Vole, Brown Rat. Pygmy Shrew.

Birds

Blackbird, Robin, Song Thrush, Mistle Thrush, Dunnock, Chaffinch, Goldcrest, Long-tailed Tit, Blue Tit, Coal Tit, Great Tit, Wren, Sparrowhawk, Greenfinch, Bullfinch, Goldfinch, Chiffchaff, Willow Warbler, Rook, Jackdaw, Hooded Crow, Starling, House Sparrow, Magpie.

Flowers

Bluebell, Wild Garlic, Primrose, Lesser Celandine, Foxglove, Honeysuckle, Tufted Vetch, Bush Vetch, Self Heal, Dog Violet, Dandelion, Daisy, Cuckoo Flower, Red Clover, White Clover, Plantain, Birds-foot Trefoil. Cotoneaster, Creeping Buttercup.

Trees

Oak, Ash, Silver Birch, Downy Birch, Lime, Horse Chestnut, Beech, Sweet Chestnut, Alder, Willow, Elder, Hawthorn, Blackthorn, Sycamore, Mountain Ash, Buddleia Bush, Cherry Laurel, Cherry Blossom.

Butterflies

Speckled Wood, Peacock, Red Admiral, Small Tortoiseshell, Small White, Large White, Green-veined White.