

Community Foundation Ireland Biodiversity Plan for the wetlands beside the Learning Hub, Limerick

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Image 1.. Summer snowflake

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1 Introduction

In 2022, the Learning Hub in Limerick (New road, Kileely, Limerick V94 YT26) secured funding from the Community Foundation Ireland (CFI) to appoint an ecologist to assist in the preparation of a biodiversity action plan for an area of wetland close to the Learning Hub.

Dr Fran Giaquinto, was appointed and she worked with Phoebe O'Brien to ensure a high standard of botanical accuracy. Fran Giaquinto is a chartered environmentalist and full member of the Chartered Institute for Ecological and Environmental Management. Phoebe O'Brien is an expert botanist and co-vice recorder for County Clare for the Botanical Society of Britain and Ireland.

The Learning Hub asked us to survey an area of wetland beside the River Shannon, a short distance from the Hub building (grid reference (R 57095 58661) The coordinator of the young people's programme at the Hub has lived in the area all his life and remembers the wetlands as a peaceful and beautiful place to go to. It was appreciated by the whole community. Over time, it has become neglected, and it has attracted large amounts of waste and anti-social behaviour. The Hub's vision and the long-term aim of this biodiversity plan is to explore the actions that can be taken to restore the natural wetland habitat and educate and engage with the local community so that the wetland is respected and protected once again.

1.1 How we developed the biodiversity plan

Fran Giaquinto and Phoebe O'Brien met two members of staff from the Learning Hub on the 16th May and we spent the morning walking the wetlands area and listening to stories about the peaceful wildlife haven that this area once was.

2 Findings of the survey

2.1 Important species

Summer snowflake

Phoebe immediately spotted summer snowflake (*Leucojum aestivum*), a beautiful flowering bulb that is found in only a few places in Ireland (Fig. 1). This section of the River Shannon is the only place it is found in County Clare. We were excited to find this as it alerted us to how special this area of wetland might be.

Riparian woodland

The summer snowflake is quite abundant, up to 20 metres in from the river bank beneath the willow trees. The woodland here is known as 'riparian woodland' which means woodland along a river habitat. This area of woodland is not seen on the historic maps (1840) so it is relatively recent. Because of the presence of summer snowflake, Phoebe queried if the woodland should be recognised as an 'Annex habitat', which means it is worthy of restoration and protection under European legislation. For this reason alone, the wetland deserves special care. We are currently making enquiries about this.



Image 2 A bank of summer snowflake beside the riparian woodland

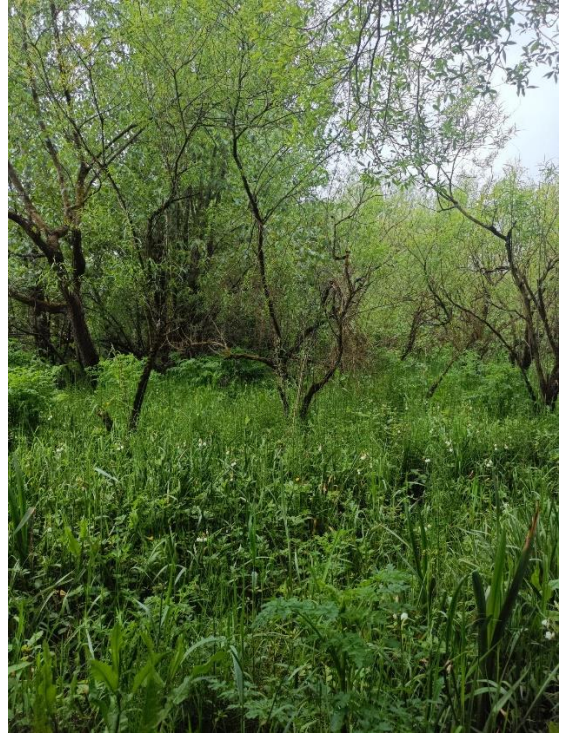


Image 3 Riparian woodland



Image 4



Image 5. Fresh water snail in the vegetation by the natural lake.

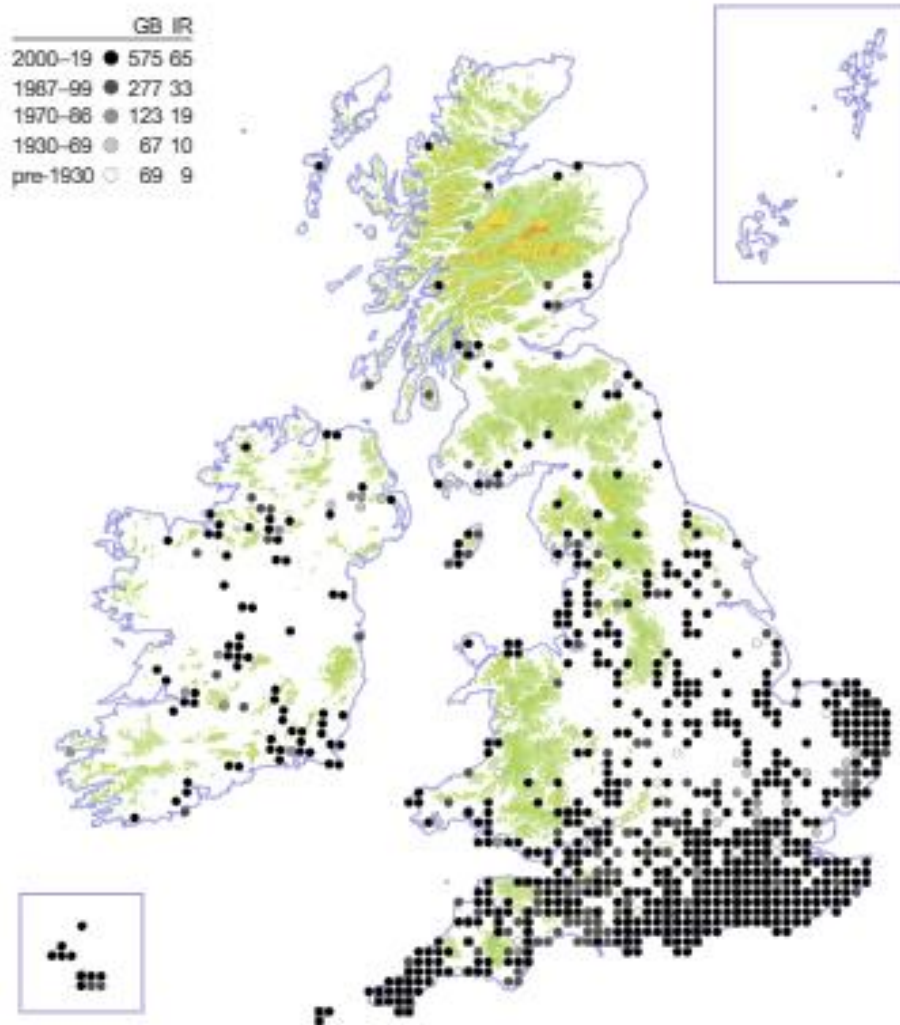


Figure 1 Distribution of summer snowflake in Ireland and Britain.
Data from Botanical Society Britain and Ireland <https://plantatlas2020.org/atlas/2cd4p9h.ygg>

We recorded many species (Table 1), including three species of willow and a variety of plants that are associated with wetland habitats such as the marsh marigold, marsh ragwort, floating sweet grass (*Glyceria max*) and English scurvygrass (*Cochlearia anglica*).

We also found a number of invasive alien species (Table 2) that are problematic, including giant hogweed which can cause a nasty skin burn on contact, Japanese knotweed, Himalayan balsam, buddleja, winter heliotrope, Traveller's joy, montbretia, Spanish bluebell, and three-cornered leek. Invasive species are frequently found in green spaces that have been neglected. They can cause terrible damage to sensitive habitats such as this wetlands area, and part of the biodiversity plan focuses on the actions that the Learning Hub and local community can take to support actions to control them.

2.2 Different habitats in the wetland

There is a mix of different habitats at the wetland. Table 3 shows the different types, which are classified according to Fossitt (2000).

Habitat	Fossitt classification
River Shannon and its banks	FW2 Depositing lowland rivers
Grassy amenity areas beside the the road	GA2 Amenity grassland
Dry meadow which is grazed by horses	GS2 Dry meadows and grassy verges
Woodland along the river	WN5 Riparian woodland

2.3 Description

The first area we walked through was the amenity grassland which leads down to a jetty and the water's edge. Here, by the water, we found the first summer snowflake. We then walked along the river path where there is a wide verge of summer snowflake mixed with tall yellow meadow buttercup (*Ranunculus acris*), and beside this is an area of riparian woodland.

The edges of the woodland have a dense undergrowth with swathes of summer snowflake. The main tree species are different willows and alder with some ash and a hybrid poplar. All the ash are dying due to ash dieback disease caused by an invasive alien fungus that originated in Asia and reached Europe in 2009.

In more open areas, where there is no shade from the tree canopy, dense brambles dominate. Phoebe identified a microspecies here, which is of interest to botanists.

The natural lake would have been enjoyed by generations of families living in the area until the wetland became neglected.

Paths are overgrown and bounded on both sides by brambles, winter heliotrope and Himalayan balsam.

There is an extensive dry grassy area which is bounded by trees and it is very pleasant and peaceful. Horses graze this area so the grass is very tight. The grazing is of benefit to LCCC because it prevents invasive species from spreading further. We noticed that the horses have no water, in spite of the dry warm weather and we encourage the Learning Hub to put pressure on LCCC to pipe water to the field for animal welfare purposes.

Invasive species have encroached the entire wetland (Table 2). If they are not controlled, the conservation value of the wetland will be lost and the valuable amenity and wildlife potential of the area will be further diminished.

Many different invasive species have arrived in Ireland in recent years, both animal, plant, insect, and microbial. Some of the most serious are controlled by European legislation. Giant hogweed, Himalayan balsam, and Japanese knotweed are controlled by the EC (Birds and Natural Habitats) regulations SI477 (2011) which makes it an offence to knowingly allow the dispersal or escape of the species listed in the Third Schedule of the legislation. This means that LCCC has a responsibility to prevent their spread. This is particularly the case with giant hogweed which is a public health concern. The Learning Hub can contact LCCC to report the presence of the controlled species and LCCC are duty bound to take action.

Table 2 lists the invasive plant species recorded at the wetland.

3 Actions

The wetland represents has the potential to be an Annex habitat and we are currently making enquiries about this. The Learning Hub has taken excellent action in securing funding for a biodiversity plan. Limerick City and County Council (LCCC) should also be informed as it can work collaboratively with the National Parks and Wildlife Service to identify and fund appropriate actions.

The main actions for the Learning Hub are therefore to inform NPWS and LCCC and to work collaboratively with them where possible. The Learning Hub is in a unique position in that it closely engages with the local community through the Hub activities and there are opportunities to raise awareness and educate with the aim of encouraging local residents to respect and protect this area which has a high amenity value in addition to its conservation value.

We have identified 5 main themes for the biodiversity plan.

- 1 Inform LCCC and NPWS and engage with them where possible.
- 2 Obtain permission to collect seed (arrange through NPWS) of summer snowflake and other native wild flowers in the wetland and propagate them in the horticultural classes run at the Learning Hub. New plants can then be planted back into the wetland area.
- 3 Raise awareness and engage the local community. A project to record the memories of older residents could be very valuable. The Traveller community can be engaged if LCCC provides piped water for the horses that graze in the wetland pasture. LCCC can be engaged to explore ways to stop illegal waste and green waste dumping.
- 4 Carry out specific conservation programmes under the guidance of NPWS. This could include a systematic programme of invasive species control. Himalyan balsam, Travellers joy, and buddleya can all be tackled by communities.
- 5 Liaise with LCCC for invasive species control. Giant hogweed, Himalayan balsam, and Japanese knotweed are controlled by European legislation which means that LCCC has a responsibility to control these species in public areas. Signage should be erected to alert the public to giant hogweed which can produce a very nasty burn on contact.



Image 6 Himalayan balsam



Image 7 Himalayan balsam lining the path



Image 8 Montbretia. This has tall stems of red flowers in summer

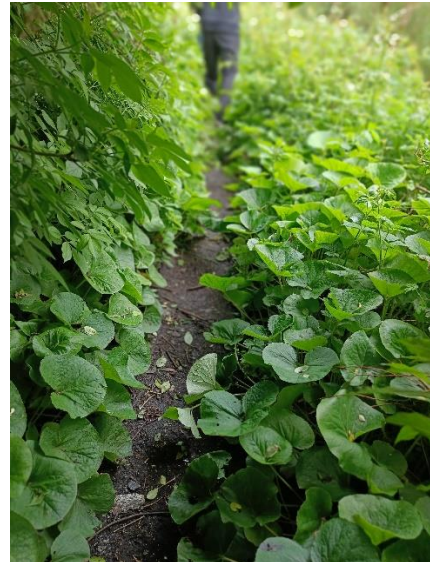


Image 9 Winter heliotrope infesting the path

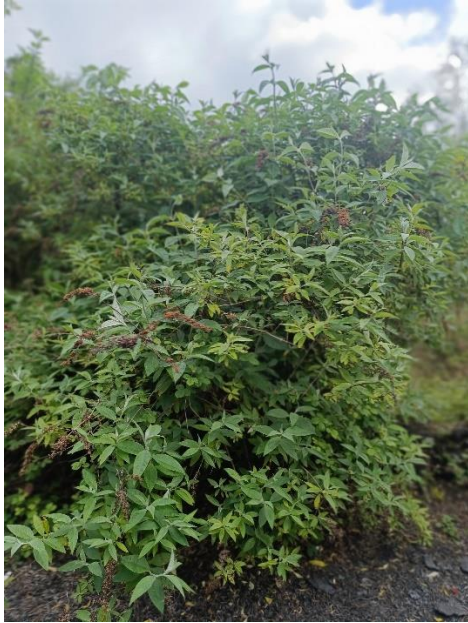


Image 10 Known as the butterfly bush because it attracts butterflies, buddleja can become very invasive.



Image 11 Young giant hogweed. This gives a nasty burn on contact and it is important to erect signage to alert the public to its danger.

Table 1 **Species recorded at the wetland**

Giant Hogweed	<i>Heracleum mantegazzianum</i>	Feabhrán capaill	APIACEAE
Hemlock Water-dropwort	<i>Oenanthe crocata</i>	Dathabha bán	APIACEAE
Winter Heliotrope	<i>Petasites fragrans</i>	Plúr na gréine	ASTERACEAE
Indian Balsam	<i>Impatiens glandulifera</i>	Lus na pléisce	BALSAMINACEAE
Cleavers	<i>Galium aparine</i>	Garbhlus	RUBIACEAE
Common Nettle	<i>Urtica dioica</i>	Neantóg	URTICACEAE
Creeping Buttercup	<i>Ranunculus repens</i>	Fearbán (reatha)	RANUNCULACEAE
Japanese Knotweed	<i>Fallopia japonica</i>	Glúineach bhiorach	POLYGONACEAE
Hedge Bindweed	<i>Calystegia sepium</i>	Ialus fáil	CONVOLVULACEAE
Ribwort Plantain	<i>Plantago lanceolata</i>	Slánlus	PLANTAGINACEAE
Curled dock	<i>Rumex crispus</i>	Copóg chatach	POLYGONACEAE
Bush Vetch	<i>Vicia sepium</i>	Peasair fhiáin	FABACEAE
Wilson's Honeysuckle	<i>Lonicera nitida</i>	--	CAPRIFOLIACEAE
Common Valerian	<i>Valeriana officinalis</i>	Caorthann corraigh	VALERIANACEAE
Traveller's-joy	<i>Clematis vitalba</i>	Gabhrán	RANUNCULACEAE
Pendulous Sedge	<i>Carex pendula</i>	Cíb chrom	CYPERACEAE
Silverweed	<i>Potentilla anserina</i>	Briosclán	ROSACEAE
Yellow Iris	<i>Iris pseudacorus</i>	Feileastram	IRIDACEAE
Broad-leaved Dock	<i>Rumex obtusifolius</i>	Copóg shráide	POLYGONACEAE
Cow Parsley	<i>Anthriscus sylvestris</i>	Peirsil bhó	APIACEAE
Summer Snowflake	<i>Leucojum aestivum</i>	Plúirín samhraidh	AMARYLLIDACEAE
Marsh-marigold	<i>Caltha palustris</i>	Lus buí Bealtaine	RANUNCULACEAE
Marsh Ragwort	<i>Senecio aquaticus</i>	Buachalán corraigh	ASTERACEAE

Water Mint	<i>Mentha aquatica</i>	Mismín mionsach	LAMIACEAE
Hard Rush	<i>Juncus inflexus</i>	Luachair chrua	JUNCACEAE
Ground-elder	<i>Aegopodium podagraria</i>	Lus an easpaig	APIACEAE
Purple-loosestrife	<i>Lythrum salicaria</i>	Créachtach	LYTHRACEAE
Rosebay Willowherb	<i>Chamerion angustifolium</i>	Lus na tine	ONAGRACEAE
Great Willowherb	<i>Epilobium hirsutum</i>	Lus na Tríoinóide	ONAGRACEAE
Meadowsweet	<i>Filipendula ulmaria</i>	Airgead luachra	ROSACEAE
Reed Canary-grass	<i>Phalaris arundinacea</i>	Cuiscreach	POACEAE
Three-cornered Garlic	<i>Allium triquetrum</i>	Glaschreamh	LILIACEAE
Spanish Bluebell	<i>Hyacinthoides hispanica</i>	--	LILIACEAE
Common Duckweed	<i>Lemna minor</i>	Ros lachan	LEMNACEAE
Greater Bird's-foot-trefoil	<i>Lotus pedunculatus</i>	Crobh éin corraigh	FABACEAE
Montbretia	<i>Crocsmia pottsii x aurea = C. x crocosmiiflora</i>	Feileastram dearg	IRIDACEAE
Common Figwort	<i>Scrophularia nodosa</i>	Donnlus	SCROPHULARIACEAE
Hydrangea (garden escape)	<i>Hydrangea macrophylla</i>		
Bulrush	<i>Typha latifolia</i>	Coigeal na mban sí	TYPHACEAE
Amphibious Bistort	<i>Persicaria amphibia</i>	Glúineach uisce	POLYGONACEAE
Reed Sweet-grass	<i>Glyceria maxima</i>	Milseán mór	POACEAE

Table 2 Invasive alien species found at the wetlands

SCIENTIFIC NAME	ENGLISH name	Legislation	ACTIONS
<i>Heracleum mantegazzianum</i>	Giant Hogweed	Controlled under the EC(Birds and Natural Habitats) regs SI477.	Inform LCCC
<i>Petasites fragrans</i>	Winter Heliotrope		Professional control
<i>Impatiens glandulifera</i>	Indian Balsam	Controlled under the EC(Birds and Natural Habitats) regs SI477.	Inform LCCC
(<i>Reynoutria japonica</i>) Used to be called <i>Fallopia japonica</i> .	#N/A	Controlled under the EC(Birds and Natural Habitats) regs SI477.	Inform LCCC
<i>Lonicera nitida</i>	Wilson's Honeysuckle		Professional and community control
<i>Clematis vitalba</i>	Traveller's-joy		Professional and community control
<i>Carex pendula</i>	Pendulous Sedge		Monitor
<i>Allium triquetrum</i>	Three-cornered Garlic	Controlled under the EC(Birds and Natural Habitats) regs SI477.	Inform LCCC
<i>Hyacinthoides hispanica</i>	Spanish Bluebell	Controlled under the EC(Birds and Natural Habitats) regs SI477.	Inform LCCC
<i>Crocsmia pottsii</i> × <i>aurea</i> = <i>C.</i> × <i>crocsmiiflora</i>	Montbretia		Professional and community control

Table 3 Biodiversity plan actions

Year	2023	2024		2025	
Months	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Theme: confirm Annex status of wetland					
Ask Phoebe to help contact the relevant experts at NPWS to visit the wetland and assess its status as an Annex habitat.					
Theme: alert NPWS and LCCC about invasive species					
Ask Phoebe and Fran to assist in contacting the right people in LCCC and NPWS to alert them to regulated invasive species in the wetland. It is particularly important that LCCC appoints professionals to eradicate giant hogweed because of public safety.					
Collect seed and propagate					
Appoint Phoebe to help with getting permission to collect seed of summer snowflake. Turn it into a horticultural project, where participants can learn how to harvest, store and grow on seed.					
Raise awareness by erecting signage					
Erect signage to alert the public to the biodiversity actions the community is taking. Signage can be downloaded for free from https://pollinators.ie/resources/signs					

Ask LCCC to erect signage to alert the public to the dangers of giant hogweed.					
Education					
Engage older participants and record their memories of the wetland. Turn this into a Learning Hub project with the aim of producing a professional recording/publication.					
Introduce citizen science initiatives, including the Fixed Insect-Flower count which is hosted by the All Ireland Pollinator Plan. This can be a very enjoyable project for children and young people. Appoint an ecologist to help.					
Check out https://invasives.ie and https://actionsoninvasives.biodiversityireland.ie and get involved in citizen science initiatives on invasive species.					
Animal welfare					
Ask LCCC to pipe water to the pasture and provide a tap which can be used to give water to the grazing horses. The tight grazing by horses is beneficial as it prevents further spread of invasive species.					