Glasgow's Buzzing Year 1 Report

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Glasgow's Buzzing

Glasgow is buzzing, it is full of life! Over 6,000 species can be found living within the city, most of which are invertebrates. Buglife has joined forces with Land and Environmental Services, Glasgow City Council (LES-GCC) to transform mown grassland in parks around Glasgow into colourful and wildlife-rich wildflower meadows. These wildflower meadows will benefit a whole range of invertebrates as well as other wildlife.

A massive 97% (3,000,000 hectares) of flower-rich grassland have been lost in the UK since World War Two. These flower-rich areas are vital habitats for wild bees, butterflies and other insects to nest and feed. The loss of this important habitat has resulted in large declines in UK pollinators as well as other invertebrates.

A wildflower meadow created at Cranhill Park in Glasgow © Suzanne Bairner

Eighty percent of plants need insects for pollination and without these plants we would not have the air we breathe and the food we eat. National reports in the press stress the importance of honeybees in food production but wild bees and other insects are even more important as they are adapted to pollinate a much wider range of plants.

This new project is funded by the Landfill Communities Fund and over three years will work to provide vital habitat for many species, particularly pollinators in Glasgow.

Wildflower meadows are an LBAP habitat and in Glasgow extensive areas of meadow are owned and managed by LES-GCC. Glasgow's Buzzing will enhance existing meadows and extend the area of wildflower meadows in the city.

Meadow Creation

The creation of wildflower meadows within parks during this project will involve planting a seed mix with a diverse range of wildflower species. This seed mix includes Yarrow (*Achillea millefolium*), Cuckoo flower (*Cardamine pratensis*), Field scabious (*Knautia arvensis*) and Red clover (*Trifolium pratense*) as well as many others that are of known Scottish origin.

Yellow rattle (*Rhinanthus minor*), a hemi-parasite of grassland will be planted into meadows within the parks. Yellow rattle will reduce the growth of grasses as it feeds on their roots and this will aid in helping to improve species diversity within the meadow.

Yellow Rattle (*Rhinanthus minor*) © Suzanne Bairner

One of the most important issues that will be dealt with within this project will be altering the parks grass cutting regime so that most of the meadow is cut once in September and then lifted, leaving an area uncut for hibernating invertebrates and other wildlife. By cutting the meadow once, this will help to reduce competition between species by killing weeds and will provide light and space within the meadow. This will ultimately create a healthier meadow and also help in improving wildflower species diversity providing a wide range of food plants for pollinating insects.

Areas of bare ground will be created through the construction of a bee bank which will provide homes for warmth loving ground nesting invertebrate species such as solitary bees and wasps, ground beetles and spiders. Bee banks not only create areas of bare ground, but they can also add topographic interest to a site. Material (such as aggregate and sand) is shaped into a mound with various slopes, hollows and angles that may be utilised and favoured by different species. Vertical banks created on bee banks take much longer to vegetate and this makes them attractive to many species. Wildflowers will be planted around the area of bare ground to provide valuable food source for any solitary bees that choose to nest in the area of bare ground.

The bee bank created by The Conservation Volunteers at Hogganfield Park © Suzanne Bairner

Parks that have benefited during year 1 of this project:

- Glasgow Green
- Hogganfield Park
- Linn Park
- Trinley Brae
- Cranhill Park

Glasgow Green

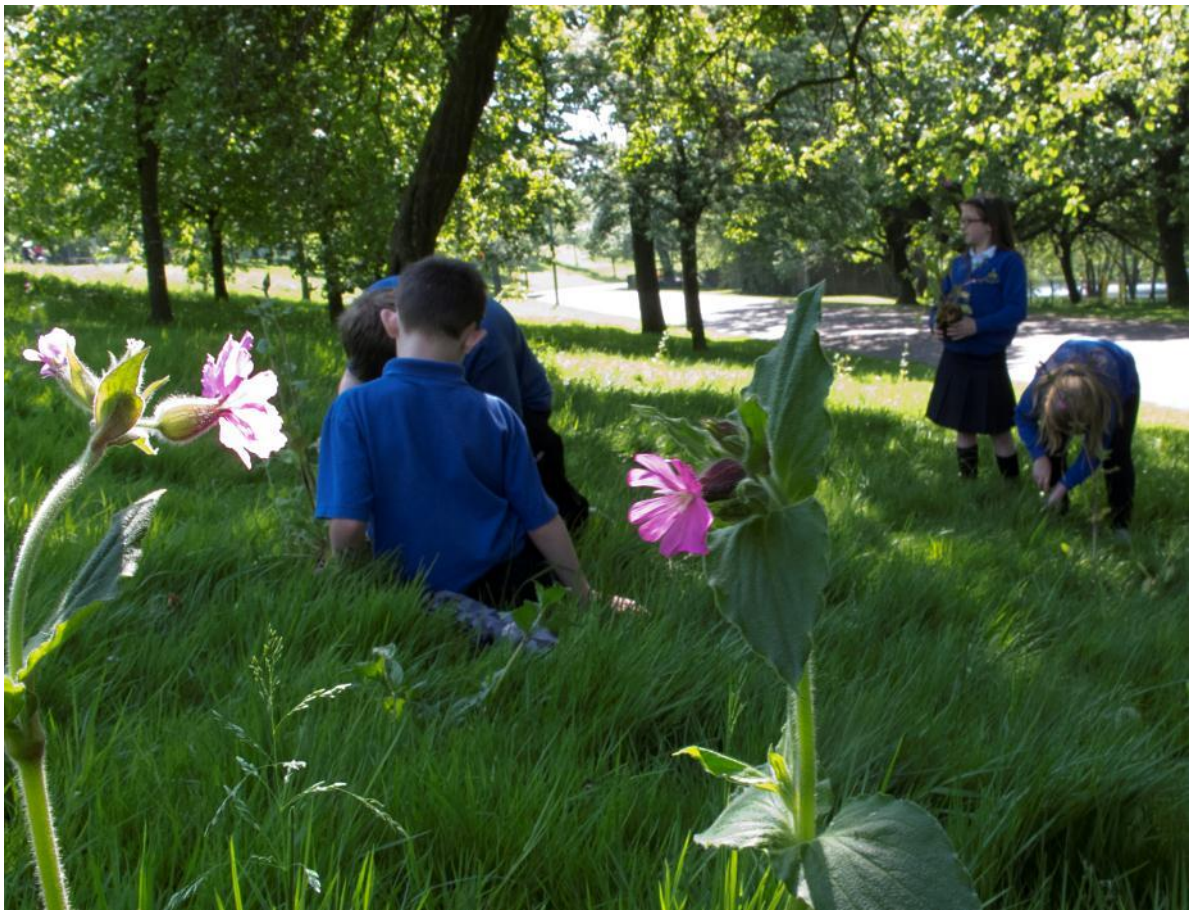
This large park within the centre of Glasgow is about 55 hectares in size. Most of the park is large areas of grass that is cut regularly and kept very short in height. This park is often used for large events such as the Glasgow Show and for firework displays that attract thousands of visitors. Due to these events, wildflower meadows will be created to the very east of the park as there is less disturbance within this area.

During year one of this project, over 1,000 wildflower plug plants have been planted by The Conservation Volunteers (TCV) into 3 different areas within the park. Two of these areas were underneath trees and shade tolerant plants including Red campion (*Silene dioica*), Hedge woundwort (*Stachys sylvatica*), Enchanters nightshade (*Circaea lutetiana*), and Lesser celandine (*Ranunculus ficaria*) were planted. Broad-leaved helleborine orchids (*Epipactis helleborine*) have since been recorded within one of these meadows.

Red campion flowering in the meadow at Glasgow Green © Cath Scott

The other area that had wildflower plugs planted was to the very east of the park and Oxeye daisy (*Leucanthemum vulgare*), Common knapweed (*Centaurea nigra*) and Field scabious that prefer more open areas were planted. Around the area of the plug plants a wildflower seed mix was sown into grassland that included 20 species of wildflowers with Common birds-foot trefoil (*Lotus corniculatus*), Yarrow and Red clover.

The 2012 International Biodiversity Day event was held at Glasgow Green in May (organised by LES-GCC and Education Services, GCC). This event involves hundreds of school children visiting their local park to find out about local and international biodiversity. This year the schools left a lasting legacy for biodiversity at Glasgow Green as they planted wildflowers to enhance the meadows.



School group planting wildflowers into the meadow at Glasgow Green © Cath Scott

Wildflower plugs have also been planted in the new meadows by the HMRC as part of a TCV/Glasgow Life Green Gym for local businesses.

Initial invertebrate surveys at this park in summer of 2011 were very poor as only 1 species the Common wasp (*Vespula vulgaris*) was recorded. Since the wildflower meadow has been planted, hoverflies including the Marmalade hoverfly (*Epysyrphus*

balteatus) and *Platycheirus albimanus* and 7 spot ladybirds (*Coccinella septumpunctata*) have been recorded.

Hogganfield Park Local Nature Reserve

Located about 5km northeast of Glasgow City Centre this park is 48 hectares in size. Various habitats are already present within the park including woodland, grassland, marshland and open areas of water. Hogganfield Loch is a large area of open water within the central area of the park and is the most important site in Glasgow for migrant and wintering water birds. A large island in the loch is important for breeding birds such as Grey heron (*Ardea cinerea*) which is the only heronry in the City.

Wildflower meadows have already been created within this park. Before the meadows were enhanced for this project, an invertebrate survey was carried out that highlighted the importance of the current meadows for pollinating insects such as bees (Buff tailed bee *Bombus pascuorum* and Red tailed bee *Bombus lapidarius*), butterflies (Green veined white *Pieris napi* and Peacock butterfly *Inachis io*) and hoverflies (Tiger hoverfly *Helophilus pendulus* and Marmalade hoverfly) as well as for Common green grasshoppers (*Omocestus viridulus*) and Red soldier beetles (*Rhagonycha fulva*).

Wildflower meadows and wetland habitat at Hogganfield Park © Suzanne Bairner

This project has improved the meadows at this park through the sowing of the diverse wildflower seed mix used at Glasgow Green. Yellow rattle seed was also sown into meadows across this park to reduce vigorous grass growth and promote wildflower species diversity.

A bank of bare ground was created at Hogganfield Park for ground nesting solitary bees and wasps with the help of TCV. This bee bank will also benefit other warmth loving invertebrate species including ground beetles, spiders and basking butterflies. Since the bank was created ground beetles, wolf spiders and centipedes have all been seen on the bare ground and the solitary bee *Colletes daviesanus* was seen feeding on wildflowers on the bank.

Linn Park Local Nature Reserve

Situated in the south side of the city, this is the second largest park in Glasgow at 82 hectares. Various habitats are present within this park including open grassland, scrub, deciduous and coniferous woodland and the riverbank environment that runs alongside the White Cart Water that passes through this park.

A wildflower meadow has previously been created to the south of this park. Through this project, a large new meadow was created in the north of the park by a combination of tining with the diverse seed sown at other parks as well as planting wildflowers.

A local farmer tining the wildflower meadow at the north of Linn Park © Cath Scott

To raise the profile of this newly designated Local Nature Reserve a public event was held here in May 2012 as part of Scottish Biodiversity Week. Members of the

public planted wildflowers at the events, and subsequently volunteers further enhanced the meadow.

The free event held at Linn Park to celebrate its new Local Nature Reserve status © Cath Scott

Invertebrate surveys at this park during year 1 were done before the meadow was enhanced. The survey highlighted the importance of the existing meadow at the south of the park to pollinating hoverflies (*Platycheirus clypeatus* and *Melanostoma scalare*), butterflies (Small copper *Lycaena phlaes*) and bees (White tailed bee *Bombus lucorum* and Garden bee *Bombus hortorum*).

Other parks that have benefited during year 1:

Trinley Brae

This is a greenspace in Knightswood in the west of Glasgow. The park is on a slope which is steep in places and meadows already present on the site have both dry and wet areas. Work on this park during year 1 of this project aimed to increase wildflower species diversity to provide a wider range of food plants for pollinators, as well as creating new meadows within the park.

Over 500 plug plants were planted by TCV volunteers including Meadow cranesbill (*Geranium pratense*) and Oxeye daisy into the dry meadow and Ragged robin (*Lychnis flos-cuculi*) and Sneezewort (*Achillea ptarmica*) into the wet meadow. TCV also created areas of bare ground along the pathway to provide nesting sites for

solitary bees and wasps. The diverse wildflower seed mix used in other parks was also sown into this park.

A volunteer from TCV digging holes into the meadow to plant wildflowers © Cath Scott

TCV volunteers after creating areas of bare ground at Trinley Brae © Cath Scott

Pollinator surveys at this park have highlighted the parks importance for invertebrates, especially for pollinators. The park is particularly important for hoverflies including *Sericomyia silentis* and *Platycheirus clypeatus* and also for Red tailed bumblebees and Common green grasshoppers.

Cranhill Park

This park is within the area of Cranhill in the East of Glasgow and is slightly south of Hogganfield Park. Several small meadows have previously been created at this park and this project has connected them by sowing the diverse wildflower species seed mix used at the other year 1 parks. Wildflower plugs have also been planted in the new meadows by the Cranhill Development Trust as part of a TCV/Glasgow Life Green Gym for local businesses, as well as the TCV midweek group.

Surveys for pollinating insects at this park during year 1 of the project highlighted the importance of the meadow that had been created. By enhancing the meadow and connecting them to other meadows within the park we have provided a greater range of wildflowers for pollinators and for other invertebrates.

Oxeye daisy at Cranhill Park in Glasgow © Suzanne Bairner

Parks that benefit during Year 2 of this project:

Pollok Country Park
This is Glasgow's largest park and is 146 hectares in size. The park is located in the south west of Glasgow just 3km from the city centre. The park is the ancestral home of the Maxwell Family and they owned it for several centuries. They gifted the park and Pollok House to the city of Glasgow in 1966. The Burrell Collection is also held within the grounds of Pollok Country Park.

Pollok Country Park has many habitats including grazed and cut meadows, ancient woodland, open water and marshland. Meadow creation has previously been done within this park and Glasgow's Buzzing will enhance these areas by making them larger as well as connecting them to other wildlife habitats such as woodland edges.

A flowering Oxeye daisy at Pollok Country Park © Suzanne Bairner

Bellahouston Park
Formal gardens, open parkland and mature trees are within Bellahouston Park which is 68.4 hectares in size. Several large attractions are associated with this park including the Victorian walled garden, Charles Rennie MacIntosh's House for an Art Lover and a Ski slope. Large events are sometimes held within the park.

There has been some habitat creation of meadows to the south west of this park. This area was ploughed and a rich wildflower species mix was planted. Work on this park during year 2 of this project aims to increase the size of this meadow and connect it to other wildlife areas within the park.

The solitary bee *Colletes daviesanus* feeding on the pollen of Corn marigold (*Chrysanthemum segetum*) at the wildflower meadow at Bellahouston Park © Suzanne Bairner

Victoria Park

This park is in the Scotstoun area in the West End of Glasgow and is 20 hectares in size. There is an extensive range of formal floral displays and carpet bedding at the site and a large pond with an island, as well as a smaller duck pond. Fossil Grove, an area with preserved fossilised trees, discovered in 1887 when an old quarry was being landscaped as part of work during the creation of the park, is also on site and is surrounded by an elaborate rock garden. An area of the large pond has been naturalised by creating shelves of wetland vegetation.

The cutting regime at the park will be reduced in an area in the south of the park. This area consists of a mixture of trees and mown grassland. Shade tolerant and sun loving wildflowers will be planted and seeded to naturalise this area of the park.