West Lothian B-Lines – Heritage Fund Evaluation Report

Project Introduction

West Lothian B-Lines was a two-year project run by Buglife, in partnership with West Lothian Council, which aimed to create, restore and enhance areas of wildflower-rich grassland across West Lothian for the benefit of pollinators and people. This project is part of Buglife's wider B-Lines initiative which is creating networks of pollinator habitat all across the UK.

Project Aims

1) To create at least 7 species-rich wildflower meadows across West Lothian-

- Focus on creating and enhancing habitat in public greenspaces such as parks and play areas
- Improve grassland management and enhance habitat connectivity along the West Lothian B-Line

2) Engage with and educate local communities on pollinators and their habitats-

- Provide training for 520 people in invertebrate identification and survey skills
- Engage 150 people in meadow creation and management for wildlife
- Work with community groups and schools local to the new meadows to encourage a sense of ownership and appreciation for these new habitats

Project delivery

Year 1

The West Lothian B-Lines project began in June 2019, with the aim of creating at least 7 new areas of wildflower meadow across public parks in the local authority area.

Suitable sites were identified by West Lothian Council in 8 public parks or community spaces for enhancement, either through the creation of brand-new wildflower meadows by sowing seed, or by changing the management regime to allow long grasses and wildflowers to come up naturally.

The sites chosen in 2019 were: Almond Park, Balbardie Park, Loaninghill Cemetery, Howden Park, Stewartfield Park, Bankton Mains Park, Eliburn Park and the Killandean Greenway.

Surveys of each of the sites (except Balbardie Park due to time constraints) took place in July 2019 to assess their biodiversity prior to enhancements. Their results are shown in Table 1 below and species lists are in Appendix A. It should be noted that Killandean Greenway is a reduced mowing site, but the management regime here actually changed before the project began, meaning that the biodiversity here was already improved by the time surveys took place. This makes it a useful indicator site of what to expect from the other reduced mowing areas in the future.

Table 1. Number of species recorded during surveys July 2019 – Prior to habitat enhancements

Location	Grid Reference	No. of wildflower species recorded	No. of pollinator species recorded
Almond Park	NT 06482 67424	8	2
Loaninghill Cemetery	NT 06706 71838	6	1
Howden Park	NT 05285 67283	5	0
Stewartfield Park	NT 08743 72682	6	0
Bankton Mains Park	NT 05302 65227 NT 05248 65213	6	0
Eliburn Park	NT 03122 67980	10	0
Killandean Greenway	NT 03439 66309	17	6

Habitat Creation

In the autumn of 2019 habitat enhancement works took place for 3 out of the 8 sites (Table 2, Figures 2-4). At each of these sites, ground preparation was first carried out by a contractor, then the bare soil was subsequently sown with native wildflower and grass seed mixes. Balbardie Park and Almond Park were both sown with the help of local primary schools, and Loaninghill Cemetery was sown by Buglife staff and volunteers. A small area next to the meadow at Almond Park was also planted with pollinator friendly, spring-flowering bulbs by Buglife staff and volunteers. Additionally, an interpretation board with information about the project and highlighting the new meadows was designed and installed at the entrance to Balbardie Park.

Figure 1 - Pupils and teachers from local primary schools sowing seed at Almond Park

In addition to these newly created meadows, areas at Bankton Mains Park and Eliburn Park were also identified for a change to a reduced mowing management regime (Figures 5 and 6). This new regime was implemented in April 2020 at both of these sites.

Table 2. Habitat creation works carried out at sites in 2019

Site	Grid Reference(s)	Enhancement Works
Almond Park	NT 06482 67424	Ground rotovated and sown with wildflower seed to create 625m^2 meadow strip and small area (340m^2) planted with bulbs
Balbardie Park	NS 97698 69869 NS 97500 70100	Ground rotovated and sown with wildflower seed to create two large wildflower meadows (1600m^2 and 1400m^2)
Loaninghill Cemetery	NT 06706 71838	Large area left to grow with a wildflower border created around the outside. (2,300m^2 total)
Bankton Mains Park	NT 05302 65227 NT 05248 65213	Two areas (total 1760m^2) converted to reduced mowing
Eliburn Park	NT 03122 67980	Area of 1080m^2 converted to reduced mowing

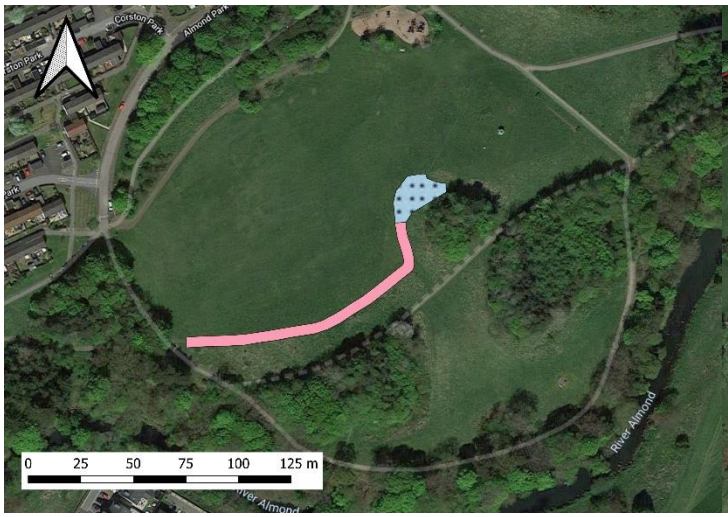

Figure 2. Wildflower meadow strip (pink) and area planted with bulbs (blue) at Almond Park

Figure 3. Wildflower meadows at Balbardie Park

Figure 4. Wildflower meadow strip (pink) and reduced mowing area (green) at Loaninghill Cemetery

Figure 5. Reduced mowing areas at Bankton Mains Park

Figure 6. Reduced mowing areas at Eliburn Park

People Engagement

In year one, we engaged with a total of 555 people from a variety of groups and backgrounds through different aspects of the project (Table 3). Efforts were made to work with local schools, community groups and local residents near to each of the meadow sites, to encourage local ownership.

402 people were engaged with through running workshops on invertebrate identification and surveying and attending public events to promote the project. 153 people were engaged through habitat creation and management. This includes 101 people that were involved in 6 habitat creation events and 52 people engaged on how to manage wildflower meadow areas through an information handout that has been created through the project and sent to West Lothian council staff.

Figure 7 - Pollinator workshop at Polbeth and West Calder Community Garden

Participants at these workshops and events all gave very positive feedback, saying that they found the sessions very interesting and useful and enjoyed themselves hugely. A further two pollinator ID sessions and another plug planting session had been planned for March and April 2020 but unfortunately these had to be cancelled due to the coronavirus outbreak.

Table 3. Events run during year 1 of West Lothian B-lines

Type of event	Number of events run	Groups worked with
Pollinator ID Workshops/Educational Sessions	10	Polbeth and West Calder Community Garden Killandean Community Allotments Group TCV Green Gym Crofthead Farm Forth Rivers Trust Environmental Group TCV Building Roots Group Letham Primary School Local Residents
Public Events (Information stalls at Wild Wednesdays and Forth Rivers Trust Events)	4	Members of the Public
Habitat Creation Events	6	Ladywell Neighbourhood Network Letham Primary School Riverside Primary School Balbardie Primary School TCV Building Roots WLC Rangers Local volunteers

Year 2

Towards the end of year one, planning for the remaining sites began and two additional sites were identified by West Lothian Council at Almondvale Park and Livingston Village Park. Livingston Village Park was selected for the creation of a new meadow and also to have a small area converted to reduced mowing. Almondvale Park was initially chosen for the creation of two large meadows, however, after visits to this site during lockdown when grass cutting was not taking place, it was noticed that this site already had a high diversity of plant and wildflower species which were doing well. Therefore, it was decided that Almondvale Park would also become a reduced mowing site to allow the wildflowers here to establish naturally.

Figure 8 - Wildflowers at Almondvale Park during lockdown

Surveys of the four remaining sites at Howden Park, Stewartfield Park, Almondvale Park and Livingston Village Park were undertaken in June 2020 to assess their biodiversity prior to habitat enhancements (Table 4 and Appendix A). Although Howden and Stewartfield Park were initially surveyed in 2019, they were surveyed again as the locations of the meadows within the parks had been changed since the first surveys. Almondvale Park was surveyed at a time when the grass was long as it had not been cut due to lockdown, so the results from this site indicate what the species diversity will be like under a reduced mowing management regime.

Table 4. Number of species recorded during surveys June 2020 – Prior to habitat enhancements

Location	Grid Reference	No. of wildflower species recorded	No. of pollinator species recorded
Howden Park	NT 05318 67259 NT 05262 67282	14	2
Stewartfield Park	NT 08743 72682	14	8
Livingston Village Park	NT 04447 66991 NT 04265 66806	9	7
Almondvale Park	NT 05333 66957 NT 05149 66926	25	7

Habitat Creation

Habitat works at Howden Park, Stewartfield Park and Livingston Village Park took place in November 2020 (Table 5, Figures 9-11). All sites were rotovated and sown with native wildflower and grass seed mixes by a contractor, as working with local groups and schools was no longer possible at this time due to Covid-19. A further five interpretation boards have also been designed and installed at Livingston Village Park, Stewartfield Park, Eliburn Park, Almond Park and Howden Park.

Table 5. Habitat creation works carried out at sites in 2020

Site	Grid Reference(s)	Enhancement Works
Howden Park	NT 05318 67259 NT 05262 67282	Ground rotovated and sown with wildflower seed to create two meadow areas, one with a gap in the middle for pedestrian access (total 3410m^2).
Stewartfield Park	NT 08743 72682	Mound flattened and spread out, ground rotovated and sown with wildflower seed to create large wildflower meadow (1600m^2).

Livingston Village Park	NT 04447 66991 NT 04265 66806	Ground rotovated and sown with wildflower seed to create large wildflower meadow (1600m^2). Area of 620m^2 converted to reduced mowing
Almondvale Park	NT 05333 66957 NT 05149 66926	Two large areas (total 3375m^2) converted to reduced mowing

Figure 9. Wildflower meadow areas at Howden Park

Figure 10. Wildflower meadow at Stewartfield Park

Figure 11. Wildflower meadow (pink) and reduced mowing area (green) at Livingston Village Park

Figure 12. Reduced mowing areas at Almondvale Park

Further surveys were carried out at all sites in the summer season following habitat enhancements. Almond Park, Balbardie Park, Loaninghill Cemetery, Bankton Mains Park and Eliburn Park were surveyed in June 2020 and Howden Park, Stewartfield Park and Livingston Village Park were surveyed in May 2021 (Table 6 and Appendix A).

It should be noted that as the surveys took place before any of the meadows had become fully established, and in some cases before many of the plants were in flower, species identification was difficult and so the results here are likely an underestimate of the number of species actually present. Low pollinator numbers can also be attributed to the fact that there were little to no flowers in many of the meadows at the time they were surveyed.

Table 6. Number of species recorded during surveys June 2020 and May 2021 – After habitat enhancements

Location	Grid Reference(s)	No. of wildflower species recorded	No. of pollinator species recorded
Almond Park	NT 06482 67424	13	3
Loaninghill Cemetery	NT 06706 71838	17	7
Balbardie Park	NS 97698 69869 NS 97500 70100	18	5
Bankton Mains Park	NT 05302 65227 NT 05248 65213	11	7
Eliburn Park	NT 03122 67980	11	5
Howden Park	NT 05318 67259 NT 05262 67282	30	0
Stewartfield Park	NT 08743 72682	26	1
Livingston Village Park	NT 04447 66991 NT 04265 66806	25	6

Figure 13 - Wildflower meadows at a) Almond Park, b) Eliburn Park, c) Balbardie Park and d) Loaninghill Cemetery

People Engagement

Unfortunately, public engagement in year two of the project was significantly impacted by the Coronavirus pandemic. Lockdown restrictions of varying degrees were in place from March 2020 right up until the end of the project in May 2021, which meant working with groups and running in-person events simply was not possible. Events which had been planned for spring and summer 2020 were postponed and rescheduled several times, in the hope that lockdown would lift and allow them to go ahead, but unfortunately restrictions remained in place much longer than was anticipated and these events were eventually cancelled altogether. When it became clear that in-person events would still not be possible in 2021, the decision was made to organise some online workshops instead. Two online pollinator workshops were held with local residents in March and May, engaging with a total of 23 people. One workshop was open to all members of the public from West Lothian and was very well attended, while the other was organised with the Livingston District Horticultural Society and was unfortunately very poorly attended with only two people joining. Ideally, more online workshops would have been delivered during this time but many of the groups who were contacted about online sessions either did not get back in touch or did not have the capacity to be involved at that time.

In hindsight, events should have been moved online much earlier in year two rather than postponing them, which would have allowed us to engage with many more people. However, the circumstances were extremely challenging and unpredictable due to the pandemic, making effective planning difficult.

Review

Overall, despite the challenges faced due to the Coronavirus pandemic in year two, the West Lothian B-Lines project has undoubtedly been a success. We have achieved and, in some cases, surpassed the targets set out at the beginning of the project.

West Lothian B-Lines has created a total of 15 new areas of wildflower-rich habitat across 10 sites; more than double the initial target for habitat creation. These new meadows will provide an extremely valuable network of habitat for pollinators, as well as other invertebrates and wildlife, along the West Lothian B-Line. Even though the meadows are still in their early stages, results from the surveys indicate that the habitat enhancements have already improved the biodiversity of these sites, with most sites showing a significant increase in the diversity of wildflower species. This, in turn, will increase the diversity of pollinators and other insects once the meadows are more established and the wildflowers are in bloom.

West Lothian B-Lines has engaged with a total of 587 people over the course of the two-year project. Even though the initial engagement target (670 people) was unable to be

reached due to Covid-19, this is still a significant number of people who have now been better informed, trained and educated on the plight of our pollinating insects, the importance of species-rich grasslands and how they can support wildlife in their local areas. All volunteers and members of the public involved now have a new appreciation for pollinators and other invertebrates and can enjoy their local greenspaces in new ways, including taking pleasure from the meadows that have been created. The interpretation panels which have been installed at six sites will continue to inform and engage members of the public who use the parks for years to come and will ensure local people are aware of the meadows and why they are there.

This project would not have been possible without the generous support of West Lothian Council, who have worked in partnership with Buglife throughout to identify the best sites for enhancement, improved their grassland management regimes to accommodate the meadows and provided contacts for community engagement.

Buglife would like to thank the funders, Heritage Lottery Fund, West Lothian Council and Mackintosh Foundation for supporting this project.

Appendix A – Species lists from site surveys

Table A1. Species lists from initial surveys 2019/2020 – Prior to habitat enhancements

Site	Species Recorded
Almond Park	White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Buttercup (*Ranunculus sp.)* Self-heal (*Prunella vulgaris)* Rib-wort plantain (*Plantago lanceolate)* Stitchwort (*Stellaria sp.)* Umbellifers Speedwell (*Veronica spp.)* Red-tailed bumblebee (*Bombus lapidaries)* Bumblebee (unidentified)
Loaninghill Cemetery	White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Buttercup (*Ranunculus sp.)* Self-heal (*Prunella vulgaris)* Rib-wort plantain (*Plantago lanceolate)* Stitchwort (*Stellaria sp.)* White-tailed bumblebee (*Bombus lucorum)*
Howden Park	Daisy (*Bellis perennis)* Self-heal (*Prunella vulgaris)* Stitchwort (*Stellaria sp.)* Ribwort plantain (*Plantago lanceolate)* Buttercup (*Ranunculus sp.)* Dandelion (*Taraxacum)* White clover (*Trifolium repens)* Speedwell (*Veronica sp.)* Dock (*Rumex sp*.) Yarrow (*Achillea millefolium*) Ragwort (*Jacobaea vulgaris*) Cardamine (*Cardamine sp*.) Common mouse ear (*Cerastium fontanum)* Ox-eye daisy (*Leucanthemum vulgare)* White-tailed bumblebee (*Bombus lucorum*) Micro moth (*Glyphipterix sp*.)
Stewartfield Park	White clover (*Trifolium repens)* Daisy (*Trifolium repens)* Ribwort plantain (*Plantago lanceolate)* Dandelion (*Taraxacum)* Speedwell (*Veronica spp.)* Buttercup (*Ranunculus sp.)* Common mouse ear (*Cerastium fontanum)* Self-heal (*Prunella vulgaris)* Creeping thistle (*Cirsium arvense*) Lesser Stitchwort (*Stellaria graminea*) Common nettle (*Urtica dioica*) Field Forget-me-not (*Myosotis arvensis*) Hedge woundwort (*Stachys sylvatica*) Willowherb (*Epilobium sp.)*

	Peacock caterpillars (*Aglais io*) Honeybee (*Apis mellifera)* Red-tailed bumblebee (*Bombus lapidaries)* Common carder (*Bombus pascuorum)* White-tailed bumblebee (*Bombus lucorum)* Buff-tailed bumblebee (*Bombus terrestris*) Hoverflies (2 species)
Livingston Village Park	White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Buttercup (*Ranunculus sp.)* Self heal (*Prunella vulgaris)* Ribwort plantain (*Plantago lanceolate)* Dandelion (*Taraxacum)* Yarrow (*Achillea millefolium*) Speedwell (*Veronica sp.)* Lesser Stitchwort (*Stellaria graminea*) Red admiral (*Vanessa atalanta*) Red-tailed bumblebee (*Bombus lapidaries)* Buff-tailed bumblebee (*Bombus terrestris*) Common carder (*Bombus pascuorum)* Tree bumblebee (*Bombus hypnorum)* White-tailed bumblebee (*Bombus lucorum)* Grass moth (*Crambinae sp*.)
Bankton Mains Park	White clover (*Trifolium repens)* Buttercup (*Ranunculus sp.)* Stitchwort (*Stellaria sp.)* Self-heal (*Prunella vulgaris)* Marsh thistle (*Cirsium palustre)* Common spotted orchid (*Dactylorhiza fuchsii*)
Eliburn Park	White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Buttercup (*Ranunculus sp.)* Self-heal (*Prunella vulgaris)* Rib-wort plantain (*Plantago lanceolate)* Stitchwort (*Stellaria sp.)* Red clover (*Trifolium pratense)* Birds-foot trefoil (*Lotus corniculatus)* Ragged robin (*Lychnis flos-cuculi)* Ox-eye daisy (*Leucanthemum vulgare)*
Killandean Greenway (reference site for reduced mowing)	Ragwort (*Senecio jacobaea)* Thistle (*Cirsum sp.)* Stitchwort (*Stellaria sp.)* White clover (*Trifolium repens)* Red clover (*Trifolium pratense)* Ribwort plantain (*Plantago lanceolate)* Rosebay willowherb (*Chamaenerion angustifolium*) Buttercup (*Ranunculus sp.)* Daisy (*Bellis perennis)* Birds foot trefoil (*Lotus corniculatus)* Dandelions (*Taraxacum)* Speedwell (*Veronica spp.)* Meadowsweet (*Filipendula ulmaria)*

	Common spotted orchid (*Dactylorhiza fuchsii*) Raspberry (*Rubus idaeus)* Ox eye daisy (*Leucanthemum vulgare)* Self heal (*Prunella vulgaris)* Buff-tailed bumblebee (*Bombus terrestris)* Ringlet (*Aphantopus hyperantus)* Narrow bordered 5 spot burnet (*Zygaena lonicerae)* Common red soldier beetle (*Rhagonycha fulva)* Meadow brown (*Maniola jurtina*) Honeybee (*Apis mellifera)*
Almondvale Park (surveyed when grass was long, but prior to official management change)	White clover (*Trifolium repens)* Buttercup (*Ranunculus sp.)* Self-heal (*Prunella vulgaris)* Daisy (*Bellis perennis)* Lesser stitchwort (*Stellaria graminea*) Birds-foot trefoil (*Lotus corniculatus*) Ox-eye daisy (*Leucanthemum vulgare)* Yellow rattle (*Rhinanthus minor*) Ribwort plantain (*Plantago lanceolate)* Ragwort (*Jacobaea vulgaris*) Common spotted orchid (*Dactylorhiza fuchsia*) Marsh orchid hybrid (*Dactylorhiza sp.)* Early forget me not (*Myosotis discolor*) Knapweed (*Centaurea sp*.) Dock (*Rumex sp*.) Water avens (*Geum rivale*) Ragged robin (*Lychnis flos-cuculi*) Northern Marsh orchid (*Dactylorhiza purpurella*) Cardamine (*Cardamine sp*.) Greater bird's foot trefoil (*Lotus pedunculatus*) Common vetch (*Vicia sativa*) Thistles (*Cirsium sp.)* Common eyebright (*Euphrasia nemorosa)* Common sorrel (*Rumex acetosa)* Common sedge (*Carex nigra)* Honeybee (*Apis mellifera)* Red-tailed bumblebee (*Bombus lapidaries)* White-tailed bumblebee (*Bombus lucorum)* Common carder (*Bombus pascuorum)* Marmalade hoverfly (*Episyrphus balteatus*) Cranefly (*Tipulidae sp.)* Mayfly (*Serratella ignita)* Buff-tailed bumblebee (*Bombus terrestris)*

Table A2. Species lists from second surveys 2020/2021 – After habitat enhancements

Site	**Species Recorded**
Almond Park	Yellow rattle (*Rhinanthus minor)* Buttercup (*Ranunculus sp.)* White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Cornflower (*Centaurea cyanus)* Poppy (*Papaver rhoeas)* Stitchwort (*Stellaria sp.)*

	Self heal (*Prunella vulgaris)* Dock (*Rumex sp.)* Oxe-eye daisy (*Leucanthemum vulgare)* Lady's Bedstraw (*Galium verum)* Yarrow (*Achillea millefolium)* Speedwell (*Veronica sp.)* White-tailed bumblebee (*Bombus lucorum)* Red-tailed bumblebee (*Bombus lapidarius)* Hoverfly (unidentified)
Balbardie Park	Yellow rattle (*Rhinanthus minor)* Cornflower (*Centaurea cyanus)* Poppy (*Papaver rhoeas)* Ox-eye daisy (*Leucanthemum vulgare)* Forget-me-not (*Myosotis sp*.) Yarrow (*Achillea millefolium)* Mayweed (*Tripleurospermum inodorum)* Buttercup (*Ranunculus sp*.) Corn marigold (*Glebionis segetum)* Bedstraw (*Galium sp*.) Stitchwort (*Stellaria graminea)* Ribwort plantain (*Plantago lanceolata)* Dock (*Rumex sp*.) White clover (*Trifolium repens)* Dandelions (*Taraxacum)* Speedwell (*Veronica sp.)* Daisy *(Bellis perennis)* Cuckoo flower (*Cardamine pratensis)* Buff/white-tailed bee (*Bombus lucorum/terrestris)* Ringlet butterfly (*Aphantopus hyperantus)* Narcissus hoverfly (*Merodon equestris)* Tree bumblebee (*Bombus hypnorum)* Male false blister beetle (*Oedemera virescens)*
Loaninghill Cemetery	Yellow rattle (*Rhinanthus minor)* Corn marigold (*Glebionis segetum)* Corn Poppy (*Papaver rhoeas)* Ox-eye daisy (*Leucanthemum vulgare)* Mayweed (*Tripleurospermum inodorum)* Cornflower (*Centaurea cyanus)* Lesser Stitchwort (*Stellaria graminea)* White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Yarrow (*Achillea millefolium)* Speedwell (*Veronica spp.)* Buttercup (*Ranunculus sp.)* Self-heal (*Prunella vulgaris)* Ribwort plantain (*Plantago lanceolata)* Common knapweed (*Centaurea nigra)* Dandelion (*Taraxacum)* Cleavers (*Galium aparine)* Red-tailed bumblebee (*Bombus lapidaries)* 7-spot ladybird (*Coccinella septempunctata)* Tiger hoverfly (*Helophilus pendulus)* Common carder (*Bombus pascuorum)* Cranefly (*Tipulidae)* Buff/white-tailed bee (*Bombus lucorum/terrestris)* Mayfly (*Serratella ignita)*

	Wasp (*Vespinae sp*.)
Howden Park	Daisy (*Bellis perennis)* Dandelion (*Taraxacum)* Mayweed (*Tripleurospermum inodorum)* Buttercup (*Ranunculus sp.)* Yellow rattle (*Rhinanthus minor)* Speedwell (2 species) (*Veronica spp.)* Yarrow (*Achillea millefolium)* Ox-eye daisy (*Leucanthemum vulgare)* Dock (*Rumex sp.)* Common fumitory (*Fumaria officinalis)* Field scabious (*Knautia arvensis)* Cuckoo flower (*Cardamine pratensis)* Hoary plantain (*Plantago media)* Corn marigold (*Glebonis segetum)* Poppy (*Papaver rhoeas)* Cat's ear(*Hypocaeris radicata)* Common sorrel (*Rumex acetosa)* Cleavers (*Galium aparine)* Mouse ear (*Cerastium sp*.) Willowherb (*Epilobium sp*.) Knapweed (*Centaurea sp.)* White clover (*Trifolium repens)* Lesser Stitchwort (*Stellaria graminea)* Rib-wort plantain (*Plantago lanceolata)* Meadow cranesbill (*Geranium pratense)* 4 unidentified species
Stewartfield Park	Buttercup (*Ranunculus sp.)* Daisy (*Bellis perennis)* Dandelion (*Taraxacum)* Mayweed (*Tripleurospermum inodorum)* Speedwell (*Veronica sp.)* Ribwort plantain (*Plantago lanceolata)* Oxeye daisy (*Leucanthemum vulgare)* Creeping thistle (*Cirsium arvense)* Common nettle (*Urtica dioica)* Dock (*Rumex sp.)* Lesser Stitchwort (*Stellaria graminea)* White clover (*Trifolium repens)* Field scabious (*Knautia arvensis)* Corn Poppy (*Papaver rhoeas)* Yarrow (*Achillea millefolium)* Yellow rattle (*Rhinanthus minor)* Cleavers (*Galium aparine)* Willowherb (*Epilobium sp.)* Mouse ear (*Cerastium sp.)* Corn marigold (*Glebonis segetum)* 6 unidentified species Bumblebee (unidentified)
Livingston Village Park	Dandelion (*Taraxacum)* Buttercup (*Ranunculus sp.)* Speedwell (*Veronica sp*.) Mayweed (*Tripleurospermum inodorum)* Ox-eye daisy (*Leucanthemum vulgare)* Yarrow (*Achillea millefolium)* Daisy (*Bellis perennis)*

	Yellow rattle (*Rhinanthus minor)* Dock (*Rumex sp.)* Cuckoo flower (*Cardamine pratensis)* White clover (*Trifolium repens)* Common nettle (*Urtica dioica)* Field scabious (*Knautia arvensis)* Hoary plantain (*Plantago media)* Poppy (*Papaver rhoeas)* Cleavers (*Galium aparine)* Wild carrot (*Apiaceae sp*.) Mouse ear (*Cerastium sp.)* Common fumitory (*Fumaria officinalis)* Cat's ear (*Hypocaeris radicata)* Common sorrel (*Rumex acetosa)* 4 unidentified species Green-veined white (*Pieris napi)* Solitary bee (unidentified) Hoverfly 2 species Buff-tailed bumblebee (*Bombus terrestris)* Honeybee (*Apis mellifera)*
Bankton Mains Park	White clover (*Trifolium repens)* Daisy (*Bellis perennis)* Buttercup (*Ranunculus sp*.) Black medic (*Medicago lupulina)* Common spotted orchid (*Dactylorhiza fuchsii)* Stitchwort (*Stellaria sp*.) Ribwort plantain (*Plantago lanceolata)* Crested dogs' tail (*Cynosurus cristatus)* Thistles (*Cirsium sp*.) Dandelion (*Taraxacum)* Self-heal (*Prunella vulgaris)* Honeybee (*Apis mellifera)* Hoverfly (unidentified) Soldier beetle (*Cantharis flavilabris)* Ringlet butterfly (*Aphantopus hyperantus)* Common carder (*Bombus pascuorum)* Tree bumblebee (*Bombus hypnorum)* Red-tailed bumblebee (*Bombus lapidarius)*
Eliburn Park	White clover (*Trifolium repens)* Buttercup (*Ranunculus sp*.) Daisy (*Bellis perennis)* Red clover (*Trifolium pratense)* Dandelions (*Taraxacum)* Ribwort plantain (*Plantago lanceolata)* Ragged robin (*Lychnis flos-cuculi)* Birds-foot trefoil (*Lotus corniculatus)* Ox-eye daisy (*Leucanthemum vulgare)* Common knapweed (*Centaurea nigra)* Self-heal (*Prunella vulgaris)* White/buff-tailed bee (*Bombus lucorum/terrestris)* Red-tailed bumblebee (*Bombus lapidarius)* Common carder (*Bombus pascuorum)* Butterfly (unidentified) Cranefly (*Tipulidae sp*.) Blue-green lacewing (*Chrysopidae sp*.)