


John Muir Pollinator Way Report: West Lothian

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Saving the small things that run the planet

Summary

The John Muir Way, opened in 2014, stretches 134 miles through nine local authority areas including West Lothian.

This B-lines project, the first in Scotland, has identified new opportunities for grassland habitat creation, enhancement and management along the route of the John Muir Way as it passes through the north of West Lothian as well as 1.86 miles either side of this. Through this mapping exercise a number of sites have been identified including 7 schools and nurseries; 3 care homes; 8 places of worship and cemeteries; 2 historic landmarks and buildings; and 1 train station. Additionally, 3 golf courses (73.8 ha), 9 public parks and play spaces (267.81 ha) and 1 country park (369 ha) were identified.

There are a number of sites within this project that have nature conservation designations, including 23 Sites of Importance for Nature Conservation (496.37 ha) and 5 Sites of Special Scientific Interest (84.13 ha). A further 2 sites have previously been identified as having an Open Mosaic of Habitat on Previously Developed Land with a total of 34.7 ha.

By mapping new opportunities this will aid in the future development of projects that will provide real benefits to our declining populations of pollinating insects of bees, wasps, hoverflies and butterflies as well as other wildlife that these habitats support.

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1. Introduction

The route of the John Muir Way stretches 134 miles (215 kilometres (km)) from Helensburgh in the west to Dunbar on the east coast (Figure 1). This walking and cycling route was opened in 2014 to commemorate the 100th anniversary of John Muir's death.

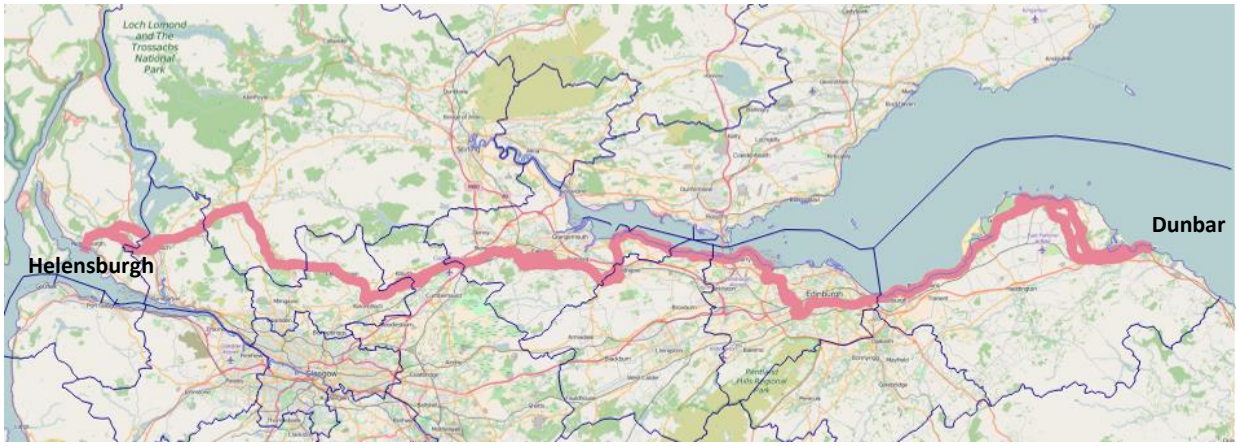


Figure 1. Route of the John Muir Way from Helensburgh in the west to Dunbar on the east coast.

During its 134 miles stretch, the John Muir Way passes through nine different local authority areas and goes through and close to several towns, including Helensburgh, Balloch, Lennoxtown, Kirkintilloch, Falkirk, Linlithgow, Edinburgh and Dunbar. This walking and cycling route passes through a varied landscape with a wide range of habitats including agriculture, coastland, parkland, housing as well as sites with various conservation designations. Many of these sites are important for a range of wildlife and plant species and allow the movement and mixing of species along and out with the route.

The route of the John Muir Way passes through West Lothian twice, once to the east of Linlithgow and another after Blackness in Falkirk following the coast of the Firth of Forth to South Queensferry. Altogether the route is about six miles long in West Lothian.

1.1 B-lines

Since the 1940's, Britain has lost over 97% of its species-rich grassland to agriculture, housing developments and industry. B-Lines are an imaginative solution to the problem of the loss in wildflower meadows and the subsequent decline of pollinating insects. The B-Lines are a series of 'insect pathways' along which Buglife aims to create and restore at least 150,000 hectares (ha) of wildflower-rich habitat stepping stones across the UK. They link existing wildlife areas together, creating a network that will weave across the British landscape. This will provide large areas of brand new habitat benefiting bees and butterflies as well as a host of other wildlife.

B-Lines bring a range of benefits to wildlife, people and agriculture, including helping to conserve our native pollinators and a range of other wildlife; contributing towards the 2020 Biodiversity targets; helping our wildlife respond to climate change by making it easier for them to move around; increasing the number of insect pollinators and the benefits these bring to our farming sector (pollination being an important 'ecosystem service'); bringing nature to people; and giving opportunities for everyone to play their part and help create the B-Lines network.

Making the B-lines happen will take time and will need farmers, land owners, wildlife organisations, businesses, local authorities and the general public to work together to create flower-rich grassland in the best locations.

'John Muir Pollinator Way' is the first B-lines project in Scotland. Through this study, this project has mapped opportunities for wildflower grassland creation, enhancement and management along the entire route of the John Muir Way as it passes through West Lothian. This B-lines map will include not only areas that are currently used as amenity grassland such as at public parks and in school grounds but also sites that have nature conservation designations and are currently managed for their important grassland habitats. By mapping these opportunities it identifies where current habitat is, how it can be better managed and where projects should focus to further benefit wildlife and communities in the future.

2. Method

Opportunities for the creation, enhancement and management of grassland meadows and other habitats important for pollinating insects and other invertebrates were mapped using an online Geographic Information System (QGIS) along the 6 miles route of the John Muir Way as it passes through West Lothian as well as 1.86 mile (3km) either side of this. This area covers a total 4,718 ha of land.

Potential opportunities on sites with no nature conservation designations were identified based on if they held grounds for habitat creation and enhancement, these sites were then marked by a round circle and included high schools, primary schools, nurseries, care homes, places of worship, cemeteries, historic landmarks, historic buildings and train stations.

Scotland's Greenspace Map, available from Scottish Natural Heritage (SNH) provides information about the type and extent of greenspace in urban Scotland in towns and cities with a population of over 3,000. This map was compiled in 2011 from greenspace data provided by the 32 Scottish local authorities and categorises greenspace into 23 different open space types (for example, public parks, private gardens, play areas, semi-natural, community gardens and allotments). Using Scotland's Greenspace Map, public parks, play spaces and golf courses were identified and mapped on the B-lines using polygons to calculate the area of each site; further information on the location and names of public parks and play spaces was obtained from several of the local authority websites. Additional areas of amenity grassland identified on Scotland's Greenspace Map, including residential, business and transport were not mapped due to the number of sites and complexity in mapping them.

Polygons of designated country parks with information on the size of each site were also added to this opportunity map after being downloaded from the SNH website.

Sites designated for nature conservation within this project were downloaded from the SNH website and mapped using polygons so that the size of the area could be calculated for each site; this included Local Nature Reserves (LNR) and Sites of Special Scientific interest (SSSI). Information on Sites of Importance for Nature Conservation (SINC) and their Shapefiles was obtained by asking West Lothian biodiversity officer and The Wildlife Information Centre (TWIC) for information.

In 2013, Buglife identified sites on Scotland's vacant and derelict land register with the UK Biodiversity Action Plan (UKBAP) priority habitat 'Open Mosaic of Habitat of Previously Developed Land' (OMHPDL) and the shapefile which included the polygons for these sites was uploaded onto this B-lines opportunity map (Macadam *et al*. 2013).

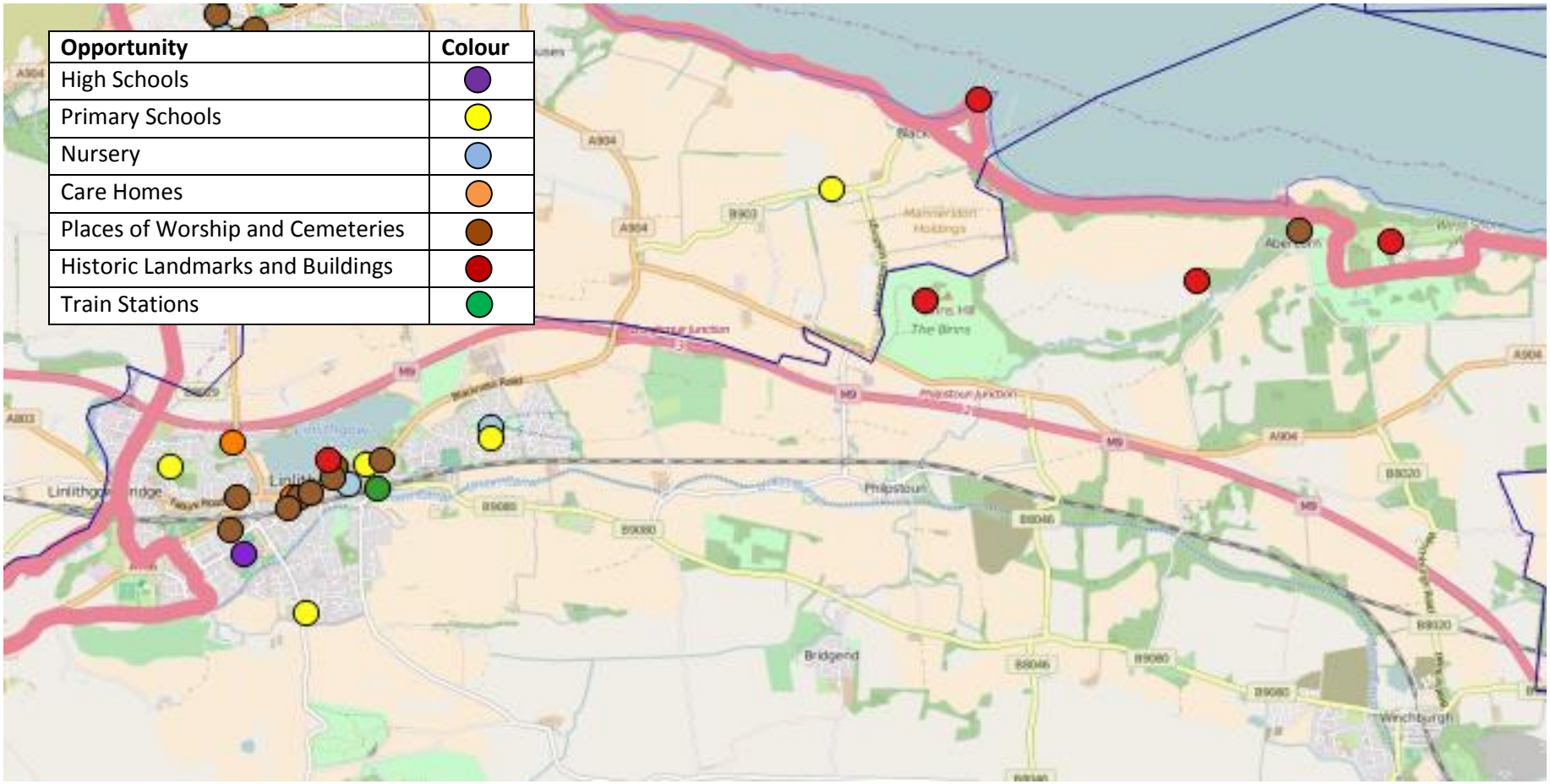
3. Results

A full list of opportunities identified can be found in Appendix 1.

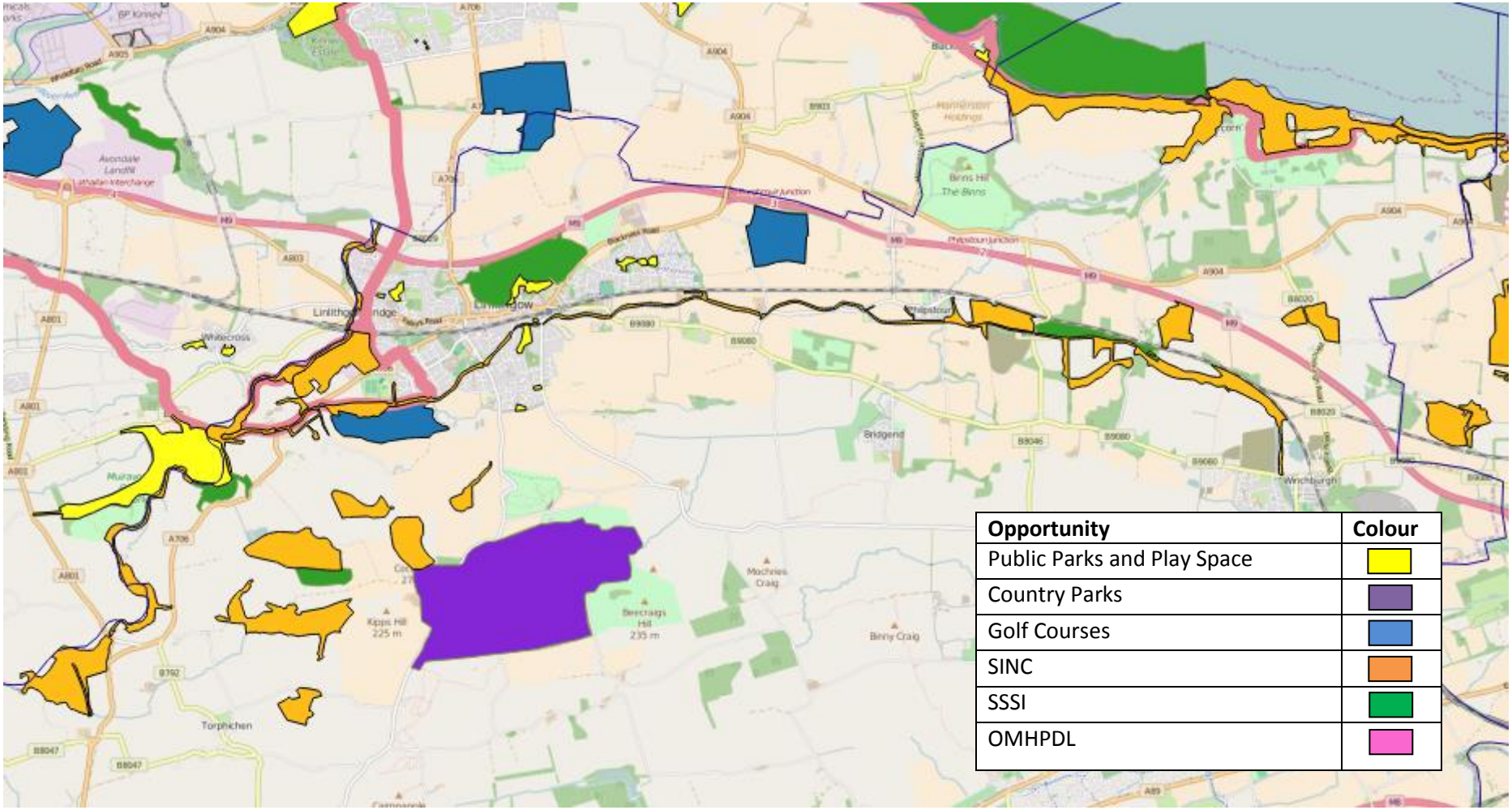
A total of 7 schools and nurseries were identified and this includes 1 high school, 4 primary schools and 2 nurseries (Table 1; Map 1); the 4 primary schools are all registered with RHS School Gardening Scheme. A further 3 care homes, 2 historic landmarks and buildings, 8 places of worship and cemeteries and 1 train station were also identified (Table 1; Map 1). There are 3 golf courses within the project are that cover a total of 73.8 ha (Table 1; Map 2). At least 9 public parks and play space were identified and these cover at least 267.81 ha of ground and include a variety of habitats from woodland, ponds and amenity grassland, additionally there is one Country park that is 369 ha (Table 1; Map 2). There are 5 sites designated as SSSI (84.13 ha) and 23 as SINCs (496.37 ha) as well as 2 sites with OMHPDL (34.7 ha) (Table 1; Map 2).

Table 3. Total number of opportunities identified for each category within West Lothian including the size of the area in for sites designated for conservation along with public parks, country parks and golf courses.

Opportunity	**Total number**	**Total Area (ha)**
High Schools	1	-
Primary Schools	4	-
Nursery	2	-
Care Homes	3	-
Places of Worship and Cemeteries	8	-
Historic Landmarks and Buildings	2	-
Train Stations	1	-
Golf Course	3	73.8
Public Park	9	267.81
Country Park	1	369
SSSI	5	84.13
SINC	23	496.37
OMHPDL	2	34.7



Map 1. Opportunities of non-designated sites in West Lothian.



Map 2. Opportunities of sites designated for conservation along with public parks and golf courses identified in West Lothian.

4. Discussion

The John Muir Way is 134 miles long and has a varied landscape, passing through nine different local authority areas, various towns and cities as well as rural habitats. The 4,718 ha of land covered by this project in West Lothian has identified various opportunities for grassland habitat creation, enhancement and management within the grounds of schools, golf courses and public parks. Each of these potential opportunities differ in the communities involved from across West Lothian and the habitats present but all have the potential to significantly increase and improve habitat for pollinating insects and other wildlife across the heartland of Scotland.

4.1 Schools

A total of 7 schools and nurseries were identified within this projects area and includes 1 high school, 4 primary schools and 2 nurseries. Most schools in Scotland have outdoor grounds that may include areas of amenity grassland as playing fields that are used by school children during breaks and during physical education (PE) lessons. Alongside these large areas of amenity ground, schools often have other outdoor areas that are may be used as a school garden or are left as areas of additional amenity grassland. It is these areas that can be enhanced for wildlife by creating biodiverse school gardens or changing the management to reduce the cutting of the area. This would not only benefit pollinating insects and other wildlife but also the school children who could help create the habitats and use them for learning and play. Wildflower meadows within the school grounds could be created with the help of the school children and parents and be managed with the help of the local authority if required.

To further benefit pollinating insects such as solitary bees, school children could be encouraged to create homes for them in wood working class. These can be installed in south facing and warm areas around the school and will create homes for wood nesting solitary bees and other invertebrates.

All the primary schools identified in this project are registered with the RHS School Gardening Scheme which aims to inspire and support schools to provide children with gardening opportunities to enhance their skills, outdoor learning and boost their development.

All of the schools identified are registered as an Eco-school, many of which have various awards associated with this. Eco-Schools are an international initiative designed to encourage whole-school community action on 'Learning for Sustainability'. This environmental management tool is a learning resource and a recognised award scheme which empowers children and young people to take action towards an economically, socially and environmentally just world. The Eco-Schools programme is managed in Scotland by Keep Scotland Beautiful.

Other school initiatives that aim to get children out of the classroom and either into their local community or developing their school grounds include Polli:nation a UK wide initiative supporting pupils from 260 schools to turn their school grounds and other areas within their local communities into pollinator friendly habitats. Unfortunately, none of the schools selected in Scotland are within this project's area although they will still be able to get involved in this initiative.

Priority Project 6 through Scotland's Biodiversity- a route map to 2020, aims to increase secondary and primary schools access to greenspace and nature for outdoor learning as part of the wider 'Learning for Sustainability' agenda. Through this, it aims to work with 100 schools by 2020 that have pupils who live in the 20% most deprived areas. Of the schools identified in West Lothian, none are classed as having pupils who live in the 20% most deprived areas.

There is a lot of scope for schools to get involved with enhancing their grounds for wildlife and for the pupils through the RHS School Gardening Scheme and Keep Scotland's Beautiful Eco-schools as well as other initiatives. It may be that further support is required to encourage more schools to actively get involved for the benefit of the school children and for declining insect pollinator populations.

4.2 Care Homes

There are three care and residential homes that were identified in the project area. It is well documented of the health and well-being benefits for people with local and easy access to wildlife as well as the increase in recovery time of patients in care homes.

It is important to provide opportunities for people in care and nursing homes and hospices to get involved in wildlife and gardening projects in their home grounds. Many of these homes often have grounds that residents can walk around either on their own or with visitors. By enhancing these areas for wildlife through the installation of planters and green walls planted with native wildflowers they will provide colour attracting life to the gardens that will make a happier and healthier place for the residents to live and enhance their experiences and quality of life (Figure 2).

Figure 2. Example of a green wall that holds a variety of plants, including wildflowers. This particular green wall also has a variety of homes for insects and other bugs.

4.3 Places of Worship and Cemeteries

There are at least seven places of worship and one cemetery identified within this project.

Many cemeteries and churchyards are well known to be important habitats for a range of wildlife including bats, birds and foxes as they are often less intensively managed as other urban green spaces. A range of habitats are often found at these sites including mature and veteran trees, old walls, wildflowers, bare ground and shrubs. By creating habitat and enhancing areas already present within the grounds this will add colour and life to the churchyards and cemeteries that will not only improve health and well-being of visitors but will provide important stepping stones for wildlife through an area.

Not all the churches identified have grounds that could be enhanced or managed but they can help to inspire local communities to actively get involved with community led projects that could benefit the local area away from the church. It is important to identify which of these churches have access

to an outdoor space and what habitats are currently present within these that could be enhanced or better managed for wildlife. This in itself could be a project that engages with communities across Scotland with their local place of worship.

4.4 Historic Landmarks and Buildings

There are two historic landmarks and buildings identified in this project; House of the Binns owned and managed by National trust for Scotland and Linlithgow owned and managed by Historic Environment Scotland. Both of these sites are tourist attractions which attract thousands of visitors a year.

Due to their historic value it is unlikely that many of these landmarks could be influenced with creating large wildflower meadow areas and other habitat, especially in sensitive areas, but it may be that small projects could influence management within small areas of a site for the benefit of pollinating insects and other wildlife, especially at sites that are known for their gardens. This could be through the installation of solitary bee homes for wood nesting species and the creation of small wildflower areas within the gardens themselves.

4.5 Train Stations

Linlithgow train station is used by thousands of commuters every day travelling to Glasgow and Edinburgh.

Linlithgow train station doesn't have much ground to develop into wildflower meadow areas but planters of varying size are currently used and planted with garden plants. By planting wildflowers within the planters this will help reduce costs of buying seasonal garden plants and reduce maintenance time. Green walls shown in Figure 2 could be placed alongside walls that are outside to further enhance the station for pollinating insects that would also provide colour and life benefitting passengers using the stations.

4.6 Golf Courses

The three golf courses within this project area cover a combined total of 73.8 ha of land.

Golf courses are well known to act as important areas for wildlife, especially in an urban area due to the various habitats present, such as woodland, hedgerows, rough grassland, ponds, ditches and heathland. Golf courses cover 1% of land in the United Kingdom. Generally between 40 – 60% of a golf course is out of play representing a significant land resource that can potentially be made available for wildlife protection and nature conservation. Many golf clubs are recognising that a naturalistic golf course environment which is attractive for wildlife is also generally more attractive to golfers.

Buglife's current meadow creation project 'Fife's Buzzing', a three year project funded by Heritage Lottery Fund and Fife Environment Trust, has enhanced Dunnikier golf course in Kirkcaldy for biodiversity by planting native and diverse wildflower species into areas that are not in play and around ponds. These have helped create a healthier place for wildlife and for the people using the course as well as getting the local community and schools involved with habitat creation events through volunteer activities.

The Golf Environment (GEO) was founded to support the golfing industry, helping it to deliver and be recognized for a positive impact for the people and nature that it touches, now and in the future. They are currently developing an awards system that encourages golf courses around the world to create areas within their grounds to further benefit wildlife. Through their system, individual golf courses will be able to identify what they are currently doing that is benefitting local wildlife but also

other activities that would provide further benefits. This could positively benefit not only pollinating insects with the planting of native species of wildflower within meadow areas that are local to the golf course, but also aquatic invertebrates through the enhancement of ponds and wildlife such as Longhorn beetles that require dead wood for their lifecycle with the enhancement and creation of areas of dead wood.

4.7 Public Parks and Play Spaces

Scotland's Greenspace Map, available from SNH, was used to identify and map the location of public parks and play spaces across the project area. Scotland's Greenspace Map was compiled in 2011 from greenspace data provided by the 32 Scottish local authorities and categorises greenspace into 23 different open space types (for example, public parks, private gardens, play areas, semi-natural, community gardens and allotments). As some of this information is incomplete, such as the names of the parks, information was also obtained using local authority websites and other sources.

A total of nine public parks and play spaces were identified covering a total of 267.81 ha. Many of these parks are well used by local communities and visitors every day for walking, cycling, running or playing.

Most parks have large areas of amenity grassland that is cut several times over a year and has very little benefits to biodiversity because of this. Through Buglife's Get Britain Buzzing campaign, we have been transforming mown grassland in parks into colourful wildflower areas for both people and wildlife to use and enjoy. In Scotland these projects have so far occurred out with the project area of the John Muir Pollinator Way in Glasgow, Perth and currently in Fife and North Lanarkshire. For example, just over half way through the three year 'Fife's Buzzing' project, Buglife has engaged with 1,057 people in the creation and enhancement of over 5 ha of wildflower meadow at 13 parks across Fife.

Through these projects we have recognised that it is important that if changing the management at parks and/or creating wildflower areas for wildlife that local communities are consulted before hand so they can decide on the best areas within their local park and the size of the area to be created and managed. It may be that all of a park is well used over the year by dog walkers and picnickers so only small edge areas could be enhanced. It is these small areas that could encourage the creation of larger areas once the public understand the change being undertaken in their local area.

Local authorities across Scotland and the rest of the UK are facing major cutbacks and are looking at ways to reduce spending. Several are known to be looking at reducing their grass cutting regime within certain areas of amenity grassland. This is great news for pollinating insects that will be able to find forage and nesting habitat within areas that are cut less regularly but not if these aren't properly managed by being cut and lift once a year. It is important that wildflower meadow areas are managed appropriately to prevent grasses becoming dominant and turning into rank grassland. Management of grasslands is site dependent and could involve grazing or cutting once a year and removing the cuttings. With a reduction in grass cutting, councils are realising that they don't have equipment to cut and lift once a year and so hire a contractor to do this, which can be an expense they can't afford within the current climate.

Several parks identified in this project, may have designated Friends of Groups that could get involved with habitat creation and management projects so as to enhance their local area. Friends of groups could apply for funding to enhance their local park for biodiversity through the creation and management of grassland.

4.8 Country Parks

Of the 36 country parks across Scotland, only one is located within this project, Beecraigs in Linlithgow and is 369 ha in size. Beecraigs Country Park is comprised of upland forest, woodland and open country including grasslands and is locally important for wildlife.

This country park has its own dedicated Countryside Ranger service that helps to manage the park as well as engage with the local community and school children through events run all year round. Due to the location of Beecraigs and the services and events available they attract huge numbers of visitors every year.

It is important that country parks follow management plans to ensure that they remain viable for wildlife and that the habitat is managed appropriately so that both people and animals can continue to use and visit the parks in the future.

4.9 Sites of Importance for Nature Conservation

A total of 23 SINCs were identified in this project area and totalled 496.37 ha. Information about these sites was obtained through TWIC.

SINCs are sites that have been designated as being important for nature conservation due to the habitats and wildlife that are present. For sites identified through this project a range of habitats are present, including woodland, heathland, reservoirs, ponds, ditches and grassland meadows. It is important that management plans are written for each site and that the correct regime is in place to ensure long-term survival of the site and its habitats for the future protection of wildlife. As it was very difficult to find information about individual sites it is assumed that management plans, if there are any are not accessible to the public or have yet to be completed.

4.10 Site of Special Scientific Interest

SSSI are those areas of land and water (to the seaward limits of local authority areas) that are considered to best represent our natural heritage, due to their species diversity and habitats, rocks and landforms present as well as a combinations of these features. SSSIs are protected by law and it is an offence for any person to intentionally or recklessly damage them. SSSI are designated by SNH under the Nature Conservation (Scotland) Act 2004.

There are over 1,425 SSSIs across Scotland, of which only five are within this project and this covers 84.13 ha; this includes the SSSI along the Firth of Forth which is shared amongst the local authority areas of Fife, Clackmannanshire, Stirling, Falkirk, West Lothian, City of Edinburgh and East Lothian and is a total of 7,435.48 ha in size and has not been included within Table 1.

Most SSSIs are in private ownership and SNH works closely with their owners and managers to ensure appropriate management of the sites natural features and to ensure that decision-makers, land managers, their agents and advisors, as well as local authorities and other public bodies, are aware of SSSIs when considering changes in land-use or other activities which might affect them.

Any Scottish public body proposing to carry out an operation that may affect an SSSI must notify SNH before starting. SNH provides each SSSI owner and occupier with a site management statement that describes the interest of the site and explains the management needed to conserve its protected natural features. For those sites which are known for their grasslands it is important that these management plans are stuck to and that the meadows are appropriately managed to ensure long-term survival of the site for their biological features.

4.11 Open Mosaic Habitat on Previously Developed Land

OMHPDL is a UKBAP priority habitat as its mosaic of habitats provides homes for a number of wildlife species and allows a natural process of succession to occur which is often limited in the over-managed countryside. Derelict sites often have areas of bare ground, early successional communities, grasslands, wetland, scrub depending on how long the site has been abandoned, soil conditions and local climate.

In 2013, a report by Macadam *et al*. remotely assessed sites on Scotland's vacant and derelict land register for OMHPDL using Google Earth maps. Of the 4,118 sites on the 2011 register, 586 were selected as potentially having OMHPDL and should be ground truthed and this amounted to over 5,600 ha of land. Of this total, two lie within this project area and cover 34.7 ha in total. Most of the sites with OMHPDL appear to have areas of bare ground and grassland on site. Ground truthing these sites would help to identify if the site has the UKBAP priority habitat OMHPDL and whether management is required to ensure long-term viability of the site.

Brownfields with OMHPDL are known to be important for wildlife due to a lack of management and low nutrients in the soil that often creates a mosaic of habitats. Many rare and scare species have been recorded at brownfield sites, often as many that are associated with ancient woodlands. Due to natural succession, many of these sites have a limited lifespan but as sites are lost to development, new sites are added that allow succession to start again.

4.12 Other Opportunities

During the mapping of opportunities for this B-lines project, other areas were recognised as being possibilities but were not mapped due to a lack of information, the number of these sites as well as the complexity of mapping them. This includes areas of amenity grassland identified on Scotland's Greenspace Map, including amenity sites recognised as residential, business and for transport. These areas of amenity grassland include road verges through our urban areas as well as regularly mown areas of amenity that are not classified as parks or play spaces but can often be large in size. All of these areas of amenity are opportunities for creating habitat for pollinators across an urban area that will allow the moving and mixing of individuals and species across these areas with more natural areas of habitat.

As well as passing through urban areas, the John Muir Way also passes through agricultural areas which were not mapped due to a lack of information on the location and use of fields. By creating wildflower strips and planting hedges along field edges this will create habitat corridors for pollinating insects and other wildlife allowing them to pass through agricultural areas safely to other areas and this will also help with the mixing of individuals and species. Wildflower strips provides additional benefits by increasing free pollination services of crops and attracting insects such as hoverflies, soldier beetles and lacewings who's larvae feed on pests such as aphids.

5. Conclusion

The 134 mile route of the John Muir Way passes through villages and towns in nine different local authority areas. Various organisations are currently involved with a variety of different projects along and around the route of the John Muir Way. For example, this includes Sustrans who are heavily involved with the cycle path network, Inner Forth Landscape Initiative which has a range of projects for biodiversity and people in Grangemouth and Bo'ness, Edinburgh Living Landscapes that are creating and managing grassland habitats within the City of Edinburgh as well as a number of community groups within the villages and towns will manage local community gardens for both people and wildlife.

This project has identified a number of opportunities in West Lothian for creating important grassland habitat within parks, golf courses, school grounds for pollinating insects that will allow the movement and mixing of individuals and species across Scotland. This will also benefit other wildlife, particularly other invertebrates, and plants.

There are various areas of residential amenity grassland within Linlithgow that could be enhanced for pollinating insects and other wildlife. Not only will these new habitats benefit wildlife but also local communities by getting people actively involved in projects and through the addition of colour and life to their areas that will benefit people's health and well-being.

This project has additionally highlighted a number of sites that have been designated for nature conservation that should be managed for the habitats present at their site. By being appropriately managed this will ensure long-term survival of these sites and habitats for wildlife and people to use and enjoy.

By mapping the opportunities at new identified sites and within currently managed sites through this project, this will aid in the future development of projects that will provide real benefits to our declining populations of pollinating insects of bees, wasps, hoverflies and butterflies as well as other wildlife that these habitats support.

References

Macadam, C., Bairner, S. and Cathrine, C. 2013. Open mosaic habitats on previously developed land: survey and recommendations for habitat planning and management in Scotland. Scottish Natural Heritage Commissioned Report No. 606.

Scottish Natural Heritage Greenspace Scotland Map, available at: http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/greenspace-and-outdoor-access/scotlands-greenspace/dataset/ last accessed 29th March 2016.

Scottish Natural Heritage Information Service, available at http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/ last accessed 29th March 2016.

Appendix 1

Opportunities within local communities and landscapes

High School
Linlithgow Academy, Braehead Road, Linlithgow, EH49 6EH

Primary School
Donaldsons School, Preston Road, Linlithgow, EH49 6HZ, RHS School Gardening registered
Linlithgow Bridge Primary School, East Mill Road, Linlithgow, EH49 7PB, RHS School Gardening registered
Low Port Primary School, Blackness Road, Linlithgow, EH49 7HZ, RHS School Gardening registered
Springfield Primary School, 141 Springfield Road, Linlithgow, EH49 7SN, RHS School Gardening registered

Nursery
Bonnytoun Nursery, 141 Springfield Road, Linlithgow, EH49 7SN
First Adventures Nursery, 43 High Street, Linlithgow, EH49 7ED

Care Homes
Linlithgow Care Home – HC One, 45 St Ninian's Road, Linlithgow, EH49 7BW
Templars Court Retirement Apartments - McCarthy & Stone, Stuart House, 181-201 High St, Linlithgow, EH49 7EN
Viewpark Nursing Home, Viewpark Retirement Home, 13-15 Abercorn Terrace, Abercorn, EH15 2DE

Places of Worship and Cemeteries
Church of Scotland, Falkirk Road, Linlithgow, EH49 7AW
Linlithgow Cemetery, 34 Merker Terrace, Linlithgow, EH49 6DD
Saint John's Evangelical Church, 1B Union Road, Linlithgow, EH49 7DY
Saint Michael's Parish Church Office, Cross House, Linlithgow, EH49 7AL
Saint Michael's Parish Church, 3 Kirkgate, Linlithgow, EH49 7AL
St. John's Christian Centre, 201 High Street, Linlithgow, EH49 7EN
St. Michael's Catholic Church, 1 St Michael's Wynd, Blackness Road, Linlithgow, EH49 7JD
St. Peter's Scottish Episcopal Church, 155A High Street, Linlithgow, EH49 7EJ

Historic Landmarks and Buildings
House of the Binns, Linlithgow, EH49 7NA; owned and managed by National Trust of Scotland
Linlithgow Palace, Kirkgate, Linlithgow, EH49 7AL; owned and managed by Historic Environment Scotland

Train Station
Linlithgow, Station Road, Linlithgow, EH49 7DH

Golf Course
Linlithgow Golf Club, Golf Course Road, Linlithgow, EH49 6QF
Kingsfield Golf Centre, Kingsfield Farm, Linlithgow, EH49 7LS
West Lothian Golf Club, Airngath Hill, Linlithgow, EH49 7RH

Public Park and Play Space
Linlithgow Loch Park Land, 3 Kirkgate, Linlithgow, EH49 7AL, grid reference NT 00351 77380
Play Space, 3 Laverock Park, Linlithgow, EH49 6AT, grid reference NT 00350 76233

Public Park and Garden, 17 Kettilstoun Road, Linlithgow, EH49 7QR, grid reference NS 98619 77311
Public Park and Garden, 17 Strawberry Bank, Linlithgow, EH49 6BJ, grid reference NT 00357 76987
Public Park and Garden, 21 Grange View, Linlithgow, EH49 7HY, grid reference NT 01438 77644
Public Park and Garden, 22 Kingsfield, Linlithgow, EH49 7SJ, grid reference NT 01678 77611
Public Park and Garden, 54 Listloaning Road, Linlithgow, EH49 7QT, grid reference NS 98791 77345
Public Park and Garden, 89 Beechwood, Linlithgow, EH49 6SE, grid reference NT 00144 76026
Public Park and Garden, 9 Rockville Grove, Linlithgow, EH49 6BZ, grid reference NT 00244 76773

Country Park

Beecraig's Country Park, Linlithgow, EH49 6PL
This country park is 369 ha in size and is comprised of upland forest, woodland and open country including grasslands. As well as being important for wildlife the Beecraig's Country Park offers a range of amenities including outdoor pursuits, camping and caravanning site, saw mill, deer farm, fishery and hilltop restaurant.

Sites with conservation designations

Local Biodiversity Sites

Avontoun Marsh and Pace Hill, site size 30 ha, grid reference NS 98000 76500
An area of open water with marshland, grassland and broadleaved plantation woodland on former gravel workings. This site is known to be very important for moths. Site is managed by local community groups and used for biodiversity access purposes.

Bowden Hill, Belsdyke, site size 32.51 ha, grid reference NS 97500 74474
An area of mixed deciduous woodland and some open grassland.

Burn Craigs Wood and Bailes Muir, Winchburgh, site size 14 ha, grid reference NT 09300 76700
An area of semi-natural broadleaved woodland with plantations of both broadleaved and coniferous trees. This area has recently been replanted and now has several small ponds.

Canal Wood, Winchburgh, site size 23 ha, grid reference NT 07900 76100
Broadleaved plantation woodland on either side of the Union Canal with assoaicted wetland habitats.

Cockleroy Hill, Belsdyke, site size 19 ha, grid referenc e NS 98700 74700
This hill is well used by local walkers and is important for its cliffs with rare mosses and semi-improved acid grassland.

Cockleroy Reservoir, Belsdyke, site size 6 ha, grid reference NS 99500 74900
This small reservoir has adjoining semi-natural broadleaved woodland with a mixed plantation adjacent tot he area of standing water. Ancient woodland makes up 1.67 ha of ancient semi-natural woodland on the site.

Cockleroy Wood, Belsdyke, site size 12.1 ha, grid refernence NS 98358 74901
An area of mixed broadleaved woodland and some open grassland.

Craigton Quarry, Winchburgh, site size 13 ha, grid reference NT 07500 76900
A quarry with rock exposure and a damp base that has formed several shallow ponds with interesting ditches round about alongside areas of semi-improved neutral grassland and mixed woodland.

East Shore Woods and Shore, South Queensferry, site size c.16.7 ha, grid reference NT 10614 78717
This site is along the Firth of Forth and has mixed woodland alongside habitats associated with the shore.

Hopetoun House Grounds, Abercorn, site size 66 ha, grid reference NT 08800 78900
This is the grounds of Hopetoun House which has a variety of habitats including open amenity grassland, unimproved neutral grassland, broadleaved plantation as well as a small pond. The shore of the Firth of Forth passes to the north of the site.

Lochcote Reservoir and Craigend Hill, Torphichen, site size 40 ha, grid reference NS 97800 73700
Reservoir with a rich marsh around the shallow edges with an area of broadleaved and mixed plantation woodland as well as unimproved neutral grassland. This site was previously a SWT wildlife reserve.

Old Philipstoun Bing, Old Philpstoun, site size 9 ha, grid reference NT 05400 77000
The derelict bing on site is mostly still bare with early successional communities. The lower parts of the site away from the bing are now scrub which is dense and continuous in places along with some open grassland.

River Avon: Carriber Glen to Linlithgow Bridge, White Cross, site size 16 ha, grid reference NS 97400 76400
The River Avon at this section has broadleaved semi-natural woodland on either side.

River Avon: Linlithgow Bridge, site size unknown, grid reference NS 98248 77655
The River Avon at this section as it passes to the west of Linlithgow has broadleaved semi-natural woodland on either side.

River Avon: Torphichen Bridge to Carriber Glen, site size unknown, grid reference NS 96861 75781
The River Avon at this section has broadleaved semi-natural woodland on either side. This part of the river passes along the south part of Muiravonside Country Park.

The Desert and Wallace's Cave, Westfield, site size 40 ha, grid reference NS 95000 73100
The River Avon passes along the north of this site which is woodland with a rich species diversity of ground flora. Woodland includes coniferous plantation and semi-natural broadleaved woodland. Unimproved neutral grassland is also present on the site.

The Knuckles, Gormyre Hill, Torphichen, site size c.12 ha, grid reference NS 97542 72715
An area of open grassland with some dense continuous scrub.

Union Canal: Avon Aquaduct to Linlithgow, site size 18 ha, grid reference NS 97800 76000
The Union Canal has a variety of associated habitats including scrub, broadleaved semi-natural woodland and unimproved neutral grassland and other wetland habitats alongside standing water.

Union Canal: Linlithgow, site size unknown, grid reference NS 99584 76458
The Union Canal has a variety of associated habitats including scrub, broadleaved semi-natural woodland and unimproved neutral grassland and other wetland habitats alongside standing water.

Union Canal: Park Farm to Philpstoun, site size 6 ha, grid reference NT 04000 77000

The Union Canal has a variety of associated habitats and in this section is broadleaved plantation, mixed plantation, continuous scrub, semi-improved neutral grassland, poor semi-improved grassland and tall ruderal on either side of the standing water.

Union Canal: Philopstoun East to Craigtoun, site size 19 ha, grid reference NT 06200 76600
The Union Canal has a variety of associated habitats and in this section is semi-natural broadleaved woodland, mixed broadleaved and conifer plantation alongside either side of the standing water.

Unon Canal: Linlithgow to Park Farm, site size 6 ha, grid reference NT 02100 77200
The Union Canal has a variety of associated habitats including scrub, poor semi-mproved grassland and other wetland habitats alongside standing water.

Wester Shore Road, Abercorn, site size 56 ha, grid reference NT 06700 79300
This site is broadleaved plantation woodland in coastal surrounds.

Site of Special Scientific Interest

Carriber Glen, SNH site code 327, size 9.78 ha, grid reference NS 968752
Carriber Glen is situated approximately two kilometres south west of Linlithgow in West Lothian. It is one of the two largest areas of semi-natural mixed deciduous woodland in West Lothian, with a complex geology leading to a diversity of woodland types within the site.
Notified Natural Features:
Biological: Woodland: upland mixed ash woodland

Firth of Forth, SNH site code 8163, size 7435.48 ha, grid reference NS 851934 to NO 632087 & NT 678792; this SSSI is shared with Fife, Clackmannanshire, Stirling, Falkirk, West Lothian, City of Edinburgh and East Lothian.
The Firth of Forth SSSI is an extensive coastal area located on the east coast of Scotland. It stretches from Alloa to Crail on the north shore and to Dunbar on the south shore. It includes the estuary upriver from the Forth bridges and the firth east of the bridges. It is of importance for a variety of geological and geomorphological features, coastal and terrestrial habitats, vascular plants, invertebrates, breeding, passage and wintering birds.
Notified Natural Features:
Geological: Stratigraphy: Lower Carboniferous (Dinantian – Namurian part), Upper Carboniferous (Namurian (part) – Westphalian)
Igneous petrology: Carboniferous – Permian Igneous
Mineralogy: Mineralogy of Scotland
Palaeontology: Arthropoda (excluding insects & trilobites), Palaeozoic Palaeobotany, Permian - Carboniferous Fish/Amphibia
Quaternary geology and geomorphology: Quaternary of Scotland
Geomorphology: Coastal Geomorphology of Scotland
Biological: Coastlands: Maritime cliff, Saltmarsh, Sand dunes
Intertidal marine habitats and saline lagoons: Mudflats, Saline lagoon
Lowland grassland: Lowland neutral grassland
Fens: Transition grassland
Vascular plants: Vascular plant assemblage
Invertebrates: Beetle assemblage
Butterflies: Northern brown argus (*Aricia artaxerxes*)
Non-breeding birds: Red-throated diver (*Gavia stellata*), Great crested grebe (*Podiceps cristatus*), Slavonian grebe (*Podiceps auritus*), Cormorant (*Phalacrocorax carbo*), Pink-footed goose (*Anser brachyrhynchus*), Shelduck (*Tadorna tadorna*), Mallard (*Anas*

platythynchos), Wigeon (*Anas penelope*), Scaup (*Aythya marila*),Eider (*Somateria mollissima*), Long-tailed duck (*Clangula hyemalis*), Common scoter (*Melanitta nigra*), Velvet scoter (*Melanitta fusca*), Goldeneye (*Bucephala clangula*), Red-breasted merganser (*Mergus serrator*), Oystercatcher (*Haematopus ostralegus*), Ringed plover (*Charadrius hiaticula*), Golden plover (*Pluvialis apricaria*), Grey plover (*Pluvialis squatarola*), Lapwing (*Vanellus vanellus*), Knot (*Calidris canutus*), Dunlin (*Calidris alpina alpina*), Bar-tailed godwit (*Limosa lapponica*), Curlew (*Numenius arquata*), Redshank (*Tringa totanus*), Turnstone (*Arenaria interpres*), Sandwich tern (*Sterna sandvicensis*)

Breeding birds: Eider (*Somateria mollissima*), Shelduck (*Tadorna tadorna*), Ringed plover (*Charadrius hiaticula*)

Linlithgow Loch, SNH site code 939, size 51.68 ha, grid reference NT 003775
Linlithgow Loch is situated on the northern edge of Linlithgow, south of the M9 motorway. The site comprises the loch and the surrounding semi-natural habitats including the reed-beds, grassland, scrub and woodland. Linlithgow Loch is the largest natural freshwater loch in the Lothian area, and is an example of a lowland eutrophic loch. The Loch supports representative examples of aquatic and emergent plant communities.
Notified Natural Features:
Biological: Freshwater: eutrophic loch

Lochcote Marsh, SNH site code 1075, size 10.22 ha, grid reference NS 979742
Lochcote Marsh SSSI is situated in the Bathgate Hills approximately 2km south-west of Linlithgow, West Lothian. The site comprises a basin mire which has developed on the site of an old loch drained in the early 19th century. The area grades from open marsh with a few isolated willows to willow-alder carr and drier willow-birch carr at the eastern end where there are also a few larger mature trees, predominantly oak, beech and pine. This is the only example of basin mire within West Lothian and is a large and unmodified example of a type of marshland habitat which is scarce and declining in the Lothian area.
Notified Natural Features:
Biological: Fens: Basin fen

Philpstoun Muir, SNH site code 1286, size 12.45 ha, grid reference NT 067767
Situated 1 km east of the village of Philpstoun, this site is a representative example of the mixed deciduous woodland to be found in West Lothian although, unlike other examples of this habitat, it is unusual in that it is not in a river gorge.
Notified Natural Features: Biological
Woodland: Upland mixed ash woodland

Sites with Open Mosaic Habitat on Previously Developed Land

Craigton Quarry, Craigton, Philpstoun, SVDL site code PT003, grid reference NT 07550 76850
There is a large area of open bare ground at this derelict site with scrub, grassland and some late successional vegetation. The site is 6.4 ha in size.

Philpstoun Bing, Philpstoun, SVDL site code PT002, grid reference NT 05650 76580
This large derelict bing is 28.3 ha and has several mounds present on site.

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Photo credits L-R; Ladybird spider *(Eresus sandaliatus)* © S. Dalton, Jellyfish © D. Huffman, Tansy beetle (*Chrysolina graminis*) © S. Falk and Large garden bumblebee (*Bombus ruderatus*) © S. Falk

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