

Fernbrae Meadows Local Nature Reserve: biodiversity on a rewilded golf course in Glasgow, Scotland

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Fernbrae Meadows Local Nature Reserve (LNR) is located on the western edge of South Lanarkshire, Scotland (NS61925879). It consists of two distinct areas, a broadleaved woodland in the south, which includes ancient woodland, and the former Blairbeth Golf course in the north, which is considered a brownfield site and is the focus of this article (Fig. 1). For more information about the history of the site see Birkin (2023).



Fig. 1. Aerial view of Fernbrae Meadows LNR, Glasgow, Scotland (arrows). (Image: Google Maps)

In 2018, as part of a project to create a new greenspace, a community consultation took place, which was facilitated by Community Links Scotland. This engagement with people from the areas surrounding the new greenspace ultimately led to the constitution of the Friends of Fernbrae Meadows group in 2019. The aims of the group were identified over several meetings and workshops and include biodiversity conservation, community engagement and community gardening.

The Friends group has worked alongside the South Lanarkshire countryside rangers to arrange and facilitate a wide variety of community engagement events that are linked to conservation aims of the site. In 2019 volunteers sowed a wildflower meadow, for the benefit of both pollinators and visitors, and every autumn they return to collect seeds to enable the creation of new wildflower meadow patches elsewhere on the site. They have also planted appropriate native flowers around the margins of new wetland areas and work to remove invasive plants like Himalayan balsam (*Impatiens glandulifera*) (Fig. 2). These practical conservation



Fig. 2. Wetland area, Fernbrae Meadows LNR, as seen from the boardwalk. (Photo: N. Digruber)

actions are done in an effort to aid natural regeneration of native species, control the spread of invasive species and reduce erosion alongside water courses. A new butterfly transect route has been established with the help of the countryside rangers and the charity Butterfly Conservation. Training has been delivered to local people to enable them to monitor and record the species of butterflies found on the site (Fig. 3).



Fig. 3. Small tortoiseshell (*Aglais urticae*), Fernbrae Meadows LNR. (Photo: N. Digruber)

The Friends group has also worked with other conservation charities, such as Amphibian and Reptile Conservation and the British Dragonfly Society, to enhance the habitat for these species and to provide educational pond-dipping sessions and stream surveys. There is also a focus on nature-friendly gardening with talks for members and allotment holders about gardening for wildlife. Dragonflies (Fig. 4) are also being recorded on an annual basis and several badger surveys have been undertaken with the help of the charity Scottish Badgers. Other regular activities include litter picking, path repair works, general maintenance and social outings. The countryside rangers have also started lunchtime “hero” sessions to encourage more people from the local community to come to Fernbrae Meadows and help with various volunteering tasks (Fig. 5).



Fig. 4. Common darter (*Sympetrum striolatum*) resting on the new boardwalk, Fernbrae Meadows LNR. (Photo: N. Digruber)



Fig. 5. Community pond dip event with Amphibian and Reptile Conservation, Fernbrae Meadows LNR. (Photo: N. Digruber)

The stream flowing through the Meadows was straightened and channelled during golf-course landscaping. During works in 2018, stream banks were re-widened and, in places, a meandering flow was allowed. Additionally, a wetland area was created and, to deal with flooding issues, two Sustainable Urban Drainage System Ponds (SUDS) were formed. A small stream was re-routed to create a wetland area on the eastern side of the LNR. As this burn passes through agricultural land before entering the LNR, its water quality has also been monitored. A recent investigation has revealed nitrate pollution and low scores for macro-invertebrate assemblages based on the Biological Monitoring Working Party (BMWP) scores (Hawkes, 1998) at four sampling points along the stream. Continued monitoring of water quality, dragonflies, water beetles and other invertebrates is intended. This will provide data to assess if water pollution continues to be an issue and to record the colonisation of aquatic species in the newly developed freshwater habitats (Fig. 6).

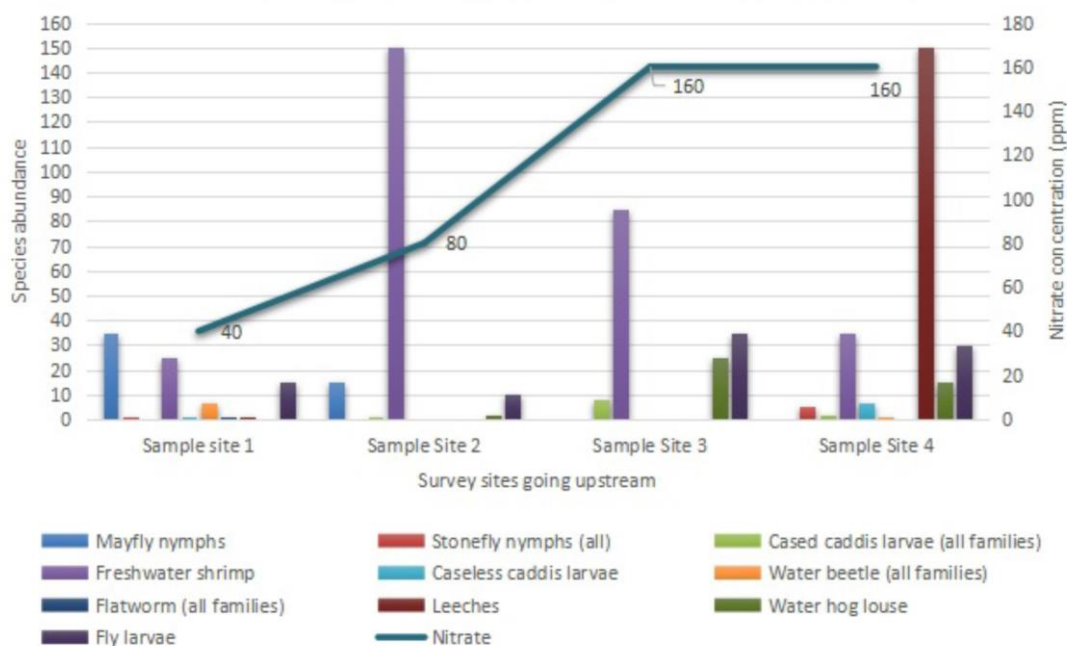


Fig. 6. Water quality survey results at Fernbrae Meadows LNR. Species abundance and nitrate measurements across four kick sample sites going upstream towards farmland.

Following on from the major landscaping in 2018, the Friends group secured funding to create a wildflower meadow at the eastern side of the site, close to the SUDS ponds. The mixture of native Scottish wildflowers, including yellow rattle (*Rhinanthus minor*), has greatly enhanced the habitat for pollinators (Fig. 7). In 2021 we supported the countryside rangers in establishing a butterfly transect to monitor their numbers on a yearly basis. Depending on volunteer numbers, we would also like to help monitor bees in the future. Yearly maintenance of the wildflower meadow has been coordinated with the countryside rangers, who also arranged “meadow-maker” events, where volunteers collected wildflower seeds for new plantings. Further expansions of wildflower habitats are planned for 2022.



Fig. 7. Yellow rattle (*Rhinanthus minor*) sown by the community as part of the wildflower meadow, Fernbrae Meadows LNR. (Photo: N. Digruber)

The Friends group has been a great asset for Fernbrae Meadows, and has been working hard towards their constituted aims. The group has established great links with conservation charities as well as other local community groups and is part of Greening Camglen, a network of local groups that work towards a greener and more sustainable future. Continued litter picks and contact with the wider community via social media and in person is helping to make Fernbrae Meadows a welcoming place for everyone. A weekly health walk has been run by volunteers for the last few years and continues to be popular. A community garden has been established with the help of Greening Camglen. The Friends have also facilitated many events and activities over the years that support both nature and people.

Future plans include further surveying and recording of the site’s biodiversity, maintenance of the wildflower meadow habitats, the creation of new wildflower areas, monitoring of the water quality, training for local volunteers, and research into the historic aspects of the site. The continued community engagement is an important aspect, as the group wishes to connect more local people with nature. Several natural craft sessions have been arranged and the group continues to work alongside the countryside rangers to support the management plan of the site. A celebration of the LNR designation is planned for the summer 2023.

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