

Holmhills Wood Community Park Local Nature Reserve, Cambuslang, Scotland: biodiversity on the doorstep

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ABSTRACT

Holmhills Wood Community Park (HWCP) has a remarkable wealth of wildlife considering it lies within the dense Glasgow suburb of Cambuslang, Scotland. It was established in 2001 following the restoration of derelict farmland which had a minor legacy of coal mining. Subsequently a portion of HWCP was lost under the construction of a large education complex but biodiversity has flourished on the remaining part, and most of the area gained Local Nature Reserve status in 2022. Up to now South Lanarkshire Council's maintenance schedule has concentrated on tasks related to public access and safety so that actions to improve biodiversity within key habitats of ponds, woods and grassland have been patchy. Designation as a Local Nature Reserve will bring more emphasis on habitat management and should also promote community engagement with nature conservation on the site. There is a Friends group of community volunteers (FHWCP) ready to help SLC to progress these objectives.

INTRODUCTION

Newly designated a Local Nature Reserve (LNR) in

2022, Holmhills Wood Community Park (HWCP) lies within the town of Cambuslang, South Lanarkshire, Scotland (Fig. 1). South Lanarkshire Council (SLC) owns and manages the site covering 18 ha (South Lanarkshire Council, 2020). Friends of Holmhills Wood Community Park (FHWCP), in partnership with SLC, are active in wildlife recording, biodiversity improvement and community engagement tasks.

RECENT HISTORY

Examination of historical maps shows the site was rural until the 1960s. There was a landscape of enclosed fields with one small wood, presumed to be a plantation, present on the Ordnance Survey First Edition map (1859) (Ordnance Survey, 1859) and named as "Holmhills Wood" on the 1934 (Ordnance Survey, 1934) and later editions. Holmhills Farm operated in the east, Whitlawburn Farm in the west, and possibly West Greenlees Farm also held ground. Only Whitlawburn Farm had buildings that were located within the current LNR boundary (see Fig. 1) and in this vicinity there is evidence of small-scale industrial working for a short period during the 20th Century. Coats Park colliery was



Fig. 1. Holmhills Wood Community Park LNR, Cambuslang, Scotland. LNR boundary marked in red. Map data: Google Earth Image © 2022 Maxar Technologies.

based just north-west of the LNR (Ordnance Survey, 1936) and an aerial photograph from 1946 (Ordnance Survey, 1946) shows new buildings and ground disturbances around the farm site strongly suggesting that coal seams were exploited under the Whitlawburn fields. Remains of farm buildings and mine workings are well hidden within today's woodland, though a single tall standing stone could be left from the farm building, and brick and concrete structures may be related to the mining or its remediation.

By the end of the 1960s, farming was abandoned across Holmhills, Whitlawburn and West Greenlees Farms coincident with Cambuslang's large residential expansion southwards. The new suburb of Whitlawburn directly replaced some farmland and the undeveloped strip sandwiched between Cambuslang and Whitlawburn was purchased by the Local Authority, then Lanarkshire County Council. For the following four decades while the land remained vacant it suffered from fly-tipping and antisocial behaviour, but wildlife colonisation would have surged. The land's status was much improved in 2001 when SLC, with European Union funding, created Holmhills Wood Community Park. This development added woods, ponds, and paths and named the amenity after "Holmhills Wood" the former farm plantation retained in the scheme. Tree cover also endured elsewhere, as did hedges that had marked former field boundaries, and these now enhance current landscape and biodiversity.

Regrettably, some recently planted woodland was lost when three schools (Cathkin High, Rutherglen High and Cathkin Community Nursery) were relocated to a large new complex completed in 2008. Historical imagery and measurement tools from Google Earth (2022) show this development destroyed around 2.5 ha of woodland. Around half of this loss can be attributed directly to construction of the buildings and surrounding hard landscaping, but a similar area of woodland was cleared to provide sufficient sports fields and improved pedestrian access. Conceivably, if the schools had not been built in HWCP, the LNR could have been 20.5 ha in area, instead of the current 18 ha.

However, looking longer-term there could be a benefit for wildlife conservation in having schools next door. Learning outdoors has recently become an integral element of the Scottish Curriculum for Excellence (Learning and Teaching Scotland, 2010) and HWCP offers readily available and high-quality outdoor classroom spaces. It is hoped that pupils' positive experiences of lessons and extra-curricular activities, such as John Muir and Duke of Edinburgh Award Schemes, will give them a sense of the heritage value of the site and encourage a more caring attitude. Additionally, FHWCP are optimistic that some pupils may be inspired to take a special interest in natural history, and thereafter make contributions to wildlife recording and conservation projects.

FHWCP formed in 2012 as a sub-group of Cambuslang Community Council. The group members have a strong

interest in nature conservation and were delighted to learn that SLC proposed to designate most of HWCP as LNR. Now that the designation has been completed, we look forward to improved habitat management and assisting with future objectives to protect natural heritage and develop educational opportunities.

HABITATS

There is a range of habitats present within HWCP (Fig. 2). Three small ponds that together constitute only 1% of the LNR's area are wildlife hotspots. The most extensive habitat type is grassland, but two thirds of this is intensively managed amenity grassland with minimal biodiversity. Varied areas of semi-natural grassland, woodland, scrub, tall herb vegetation and overgrown hedgerow complete the habitat mosaic and hold significant wildlife interest when considered within a local context.

Three ponds were created *ca.* 2000, but one has since become seasonal. All have good water quality and various plants that support thriving populations of invertebrates and four amphibian species: common frog *Rana temporaria*, common toad (*Bufo bufo*), palmate newt (*Lissotriton helveticus*) and smooth newt (*L. vulgaris*). In 2016, as part of Froglife's Living Waters project, all the ponds were mechanically dredged to restore open water. It was hoped this would control the extent of New Zealand pygmyweed (*Crassula helmsii*), (Fig. 3) but now this non-native invasive plant comprises over 75% of vegetation of the seasonal pond and dominates further areas of the other ponds. It now seems evident that, post-dredging, the seasonal pond with an expanse of bare earth that stays dry for extended periods favoured recolonisation by pygmyweed rather than native plant species and subsequent transport to other ponds was inevitable. It is possible that dredging, by damaging the compressed clay base of one pond, may have exacerbated the potential for seasonal drying though there have been several dry summers since 2016.

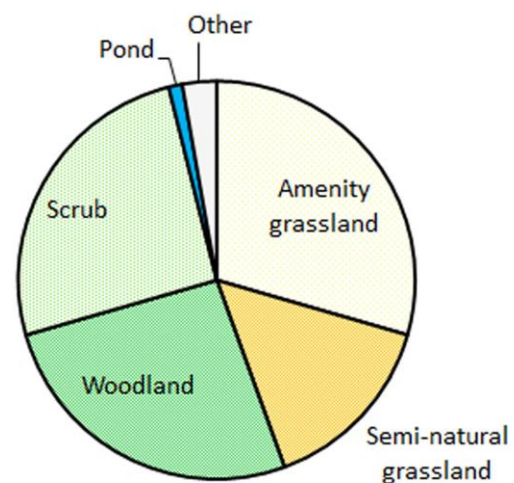


Fig. 2. Habitat composition data from South Lanarkshire Council (2020) based on Phase 1 Habitat Survey completed in 2015 by A. Park.



Fig. 3. New Zealand pygmyweed (*Crassula helmsii*) amongst marginal vegetation of a pond in HWCP, 30th May 2022. (Photo: A. Park)

Close to 100 herbaceous plant species have been recorded within the small grassland area near the ponds. Variations in soil dampness support different plant communities with common knapweed *Centaurea nigra*, lady's bedstraw (*Galium verum*), yellow rattle (*Rhinanthus minor*), crested dog's-tail *Cynosurus cristatus* and sweet vernal-grass (*Anthoxanthum odoratum*) in drier areas, and meadowsweet (*Filipendula ulmaria*), cuckoo flower (*Cardamine pratensis*) and rushes *Juncus* spp., in marshy areas. Away from the ponds there are further patches of species-rich grassland, but the remaining unmanaged grassland is much less biodiverse with a large content of coarse grasses and few forb (non-grass herbaceous plant) species. Scattered throughout the uncut grasslands there are some plant species that are atypical for the locality - including cowslip (*Primula veris*), grass vetchling (*Lathyrus nissiola*) and wild carrot (*Daucus carota* - and it is presumed they survive from recent wildflower planting. Given that there has been no grazing or grass-cutting for over 50 years the presence of such biodiversity is somewhat surprising, but scrub encroachment is now having a negative effect in places. It is hoped that the forthcoming LNR Management Plan will establish annual grass-cutting and scrub control to conserve biodiversity of the best areas and bring improvements to grassland that had become rank due to long-term neglect. Conversely, reduced mowing of the amenity grassland dominating the centre of the site has huge potential benefit for biodiversity, but it is uncertain whether local people would support such a landscape change.

The older "Holmhills Wood", along with four 20-year-old plantations, have a large component of native tree species together with a wide variety of other broadleaved and conifer trees. However, all of these woods distinctly lack the structural diversity of an ancient wood. Holmhills Wood has some fine mature trees, but it seems that the sustained and high level of antisocial behaviour (fire-lighting, trampling, fly-tipping etc.) is seriously checking the survival of understorey, shrub and ground flora layers and the natural decomposition of any standing or fallen dead

wood. Bramble patches in this wood, and in parts of the recent woods, form the principal component of the shrub layer presumably because the thorns give some protection against vandals. In most of the recent woodland, except where older trees have been retained, the trees are too closely spaced to promote structural diversity in the near future, but future LNR management should address this shortfall. It is hoped that, before long, the increased emphasis on outdoor learning in schools will help towards bringing about a reduction in vandalism. Forest School sessions occasionally held in the woods, run by community groups for children and young people, should also be effective.

Most times the woods, together with varied areas of scrub, are peaceful and interesting places for naturalists to explore. FHWCP have identified 58 tree species and several woodland ground cover plants including sweet woodruff (*Galium odoratum*), herb-Robert (*Geranium robertianum*), primrose (*Primula vulgaris*) and hedge woundwort *Stachys sylvatica*. In 2019 it was exciting to find the rare yellow bird's-nest, (*Hypopitys monotropa*) (Fig. 4) in one of the young woods. We found 34 spikes of this cream-coloured parasitic plant growing on the ground beside pine and willow trees. After verification by Michael Philip, Lanarkshire Recorder for Botanical Society of Britain and Ireland (BSBI), the sighting was entered onto the BSBI Online Atlas (BSBI, 2022) and subsequently its location marker joined just 21 other records within Scotland. Since 2019 the number of flowering stalks has dwindled, and none were found in 2022. Perhaps underground parts survive and may produce flowers in future years. As a parasite of trees using mycorrhizal fungi to extract nutrients, it may have been brought to the site along with the tree saplings planted *ca.* 2000. Its longevity will require the presence of both the specific mycorrhizal fungus and the tree host.



Fig. 4. Yellow bird's-nest (*Hypopitys monotropa*) in woodland within HWCP, 13th July 2019. (Photo: A. Wilson)

A majority of the bird species listed for HWCP (35 out of a total of 52) are dependent on woodland or scrub for food and shelter. To date, small mammal population surveys have not been attempted, but wood mouse (*Apodemus sylvaticus*) and bank vole (*Myodes glareolus*) have been seen. Amongst larger mammals, the grey squirrel (*Scurius carolinensis*) is abundant and red fox (*Vulpes vulpes*) is a permanent resident. Roe deer (*Capreolus capreolus*) are seen quite often, individually or in small groups of up to six. Since sightings of deer are intermittent with gaps of weeks or months, it is

thought they may roam across a range of local green spaces including Cambuslang Park, Kirkhill Golf Course, Fernbrae Meadows LNR or use green corridors alongside railway lines and the Borgie Glen and Whitlawburn water courses.

CITIZEN SCIENCE AND COMMUNITY ENGAGEMENT

Prior to LNR designation, FHWCP volunteers completed baseline surveys and their unpublished reports, Preliminary Tree Survey (2015) and Phase 1 Habitat Survey (2015), provided useful input during the process of LNR designation.

FHWCP have begun to compile a species list for the site. To date they have identified 278 vascular plants, 52 birds, four amphibians, 12 butterflies and nine dragonflies and damselflies. From 2019, where possible, weekly butterfly transect surveys have been completed following UK Butterfly Monitoring Scheme (2022) methodology. Analysis of butterfly survey data (Fig. 5) shows variations over the 3 years with a marked peak in numbers during 2019 due to high counts for the painted lady (*Vanessa cardui*). U.K.-wide, this long-distance migrant was present in unusually high numbers in 2019 such that Butterfly Conservation declared it a “Painted Lady Year” (Butterfly Conservation, 2019). More tentatively, due to less confident identification skills, FHWCP have recorded bumblebee species along the same transect route since 2018 and have submitted counts to Bumblebee Conservation Trust’s BeeWalk monitoring scheme (Comont *et al.*, 2021). We are keen

to build our knowledge of pond wildlife and a current focus is to search for larvae and exuviae of Odonata to determine which of the nine species seen as adults (Fig. 6) are successfully breeding in the LNR.

Alongside wildlife recording FHWCP, with SLC, Froglife (Fig. 7) and others, provide community engagement events including pond dips, bat walks, amphibian hunts, wildflower walks, litter picks, scrub clearance, and a dawn chorus experience. Social Media posting <https://www.facebook.com/holmhillspark/> is maintained to publicise events and to promote the Park and the Friends group.

FUTURE HOPES AND PLANS

With the LNR designation now in place an LNR management plan will follow, setting out targeted actions to achieve biodiversity improvements together with enhancement of educational and wellbeing opportunities for the local community. The designation and management plan should afford HCWP greater protection and additionally open up new funding streams, such as Nature Restoration Fund administered by NatureScot to extend specific outcomes. FHWCP will continue to monitor wildlife towards helping SLC to review the effectiveness of habitat management work whilst seeking to generate increased support for the LNR amongst the local community. The opportunity to promote HWCP in this publication is appreciated and we hope it may help to generate interest from naturalists further afield.

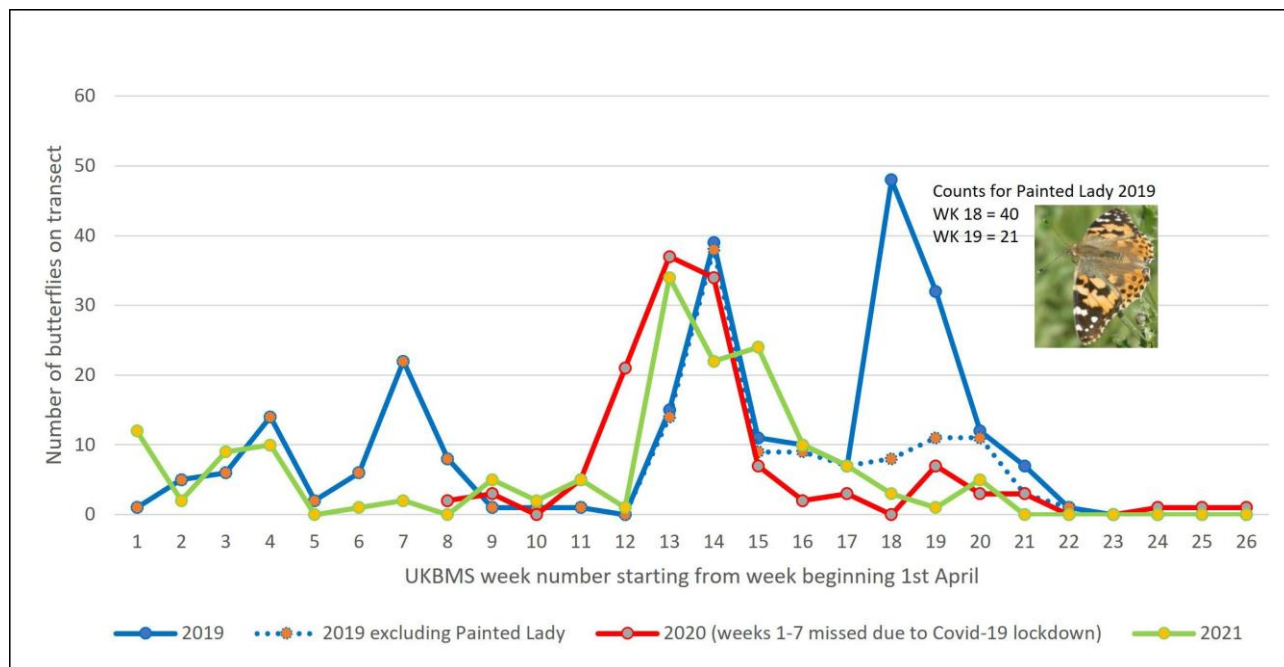


Fig. 5. Weekly butterfly counts 2019-2021 based on FHWCP butterfly transect surveys. Includes U.K. Butterfly Monitoring Scheme (UKBMS) data © copyright and database right Butterfly Conservation, the Centre for Ecology & Hydrology, British Trust for Ornithology, and the Joint Nature Conservation Committee, 2019, 2020, 2021.



Fig. 6. Four-spotted chaser (*Libellula quadrimaculata*) on a dead stem of greater reedmace *Typha latifolia* at HWCP, 28th May 2018. (Photo: A. Park)



Fig. 7. Amphibian survey evening with Froglife at HWCP, 19th April 2018. (Photo: A. Wilson)

CONCLUSION

In summary, HWCP came about because the area evaded development whilst 1960s urban expansion proceeded apace throughout Cambuslang, and thereafter changes in land use have improved biodiversity to a level appropriate for LNR designation. Poor drainage, evident throughout the site, is a key factor in this progression. The risk of flooding, together with the legacy of mining, probably blocked plans for housebuilding, though evidently both issues were dealt with during the schools' construction in 2006. Looking back to the agricultural phase, the wet ground conditions imply that traditional pasture management would have prevailed, and this would have yielded a rich seed source of wildflowers after the cessation of farming. Although for the past fifty years there has been no regular meadow management practised throughout the site there are some areas of species-rich grassland. The biodiverse grasslands are mostly around the ponds with further small patches elsewhere, presumably coinciding with soils that are waterlogged and low in fertility. By

contrast, remaining areas of unmanaged grassland comprise a much more limited range of plant species, showing the expected consequence of lapsed management.

At the time when the EU funded Community Park was created, in late 20th century, it had become normal practice to integrate biodiversity when developing public green spaces. Thus, biodiverse elements from the agricultural phase, such as "Holmhill Wood" and defunct hedgerows, were preserved. Additionally, variously aged trees and shrubs were carefully retained within both open land and new woods, and all woodland planting schemes favoured native tree species. Poor land drainage offered good potential for pond creation and three ponds were dug. Following planting with a range of native wetland plants these ponds quickly became valuable new habitats. There were other wildflower planting projects in wetland and grassland plots, notably soon after HWCP opened, but to a large extent the distribution of flora appears to be largely semi-natural. Inevitably, some non-native invasive plant species have colonised several parts of the site.

In the years since HWCP's creation, most of the land, aside from amenity grassland and path verges, has been minimally managed by SLC. In 2016 all ponds were dredged to reverse the natural spread of vegetation and since then, perhaps due to holing caused by excavating machinery, one has become dry for substantial periods of the year. The recent LNR designation raises prospects that all the habitats will receive management sympathetic to nature conservation. SLC are already exploring funding to revisit vegetation removal from the ponds, and a detailed woodland management plan is in preparation. In the future FHWCP hope that an annual programme of partial pond clearance may be instated instead of repeating the more drastic cycle of years of neglect followed by clearing of the whole pond. There should also be consideration given to restoring watertightness of the seasonal pond which currently harbours a large reserve of invasive New Zealand pygmyweed. A desired consequence of woodland management would be an increased structural diversity as this will help to support a greater variety of woodland flora and fauna. Regarding meadow management, it is encouraging to see that SLC have recently introduced this practice at nearby Fernbrae Meadows LNR and should therefore be ready to schedule this also at HWCP. While it is clear that prolonged continuation of extensive areas of amenity grassland areas does not fit with LNR management objectives it is understood that there may be some delay, or design compromise, in order to deal with a pre-existing designation as sports field.

FHWCP have already made an important contribution to substantiating the wildlife value of HWCP and are ready to help with monitoring benefits of LNR habitat management. The group also has an important role to play in the vital LNR aim of helping people to understand and become more aware of the importance of the site. We are optimistic that increased community engagement will lead to a greater acceptance of those

changes in land management that are required to enhance biodiversity, such as reduced grass mowing, and also achieve reductions in damage caused by antisocial behaviour.

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