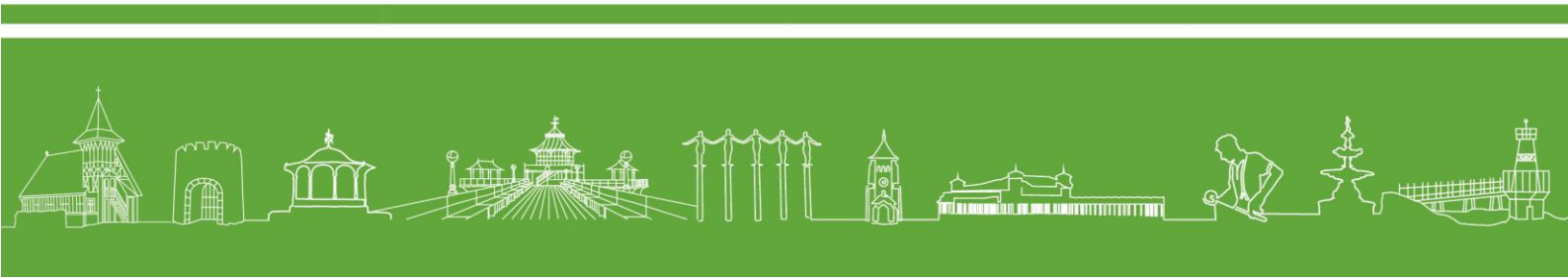# North Somerset Council
Rewilding Champion Project with Avon Wildlife Trust.

A Heritage Lottery funded project

Summary document 2023

Contents:

Overview:

In 2019, the North Somerset Council (NSC) declared a Climate and Nature Emergency. As part of that, NSC introduced the North Somerset Council Rewilding programme to help improve biodiversity and create habitats across their parks and open spaces.

Over the last three years, the NSC has planted 30,000 trees and created around 400,000m^2 (c. 40 hectares) areas of tall grass. NSC implemented a policy to rewild 25% of its amenity grass areas (c. 60 hectares).

To determine the success of the project by measuring the biodiversity increase in the rewilded grass areas, NSC, in partnership with Avon Wildlife Trust, applied for a Heritage Lottery bid to fund its Rewilding Champions project. The bid was successful and the project was awarded £100,000.

Avon Wildlife Trust was responsible for planning and delivering a comprehensive biodiversity monitoring programme, volunteer training and community engagement events over the last year.

The North Somerset Rewilding Champions project (NSRC) aimed to engage local communities in understanding and monitoring the biodiversity of the rewilded areas of amenity grasslands in North Somerset while supporting skills development and employability.

The main objectives of the project were achieved and can be summarised as follows:

- Placements – Two people were given the opportunity to gain vocational training and employability skills, funded by a bursary.
- Community engagement – outreach to local communities to inspire and engage people with these wilder spaces.
- Upskilling local people – training was provided by AWT in species identification and survey techniques to improve employability in conservation.
- Biodiversity monitoring – monitoring changes in biodiversity following changes in management and comparing these areas with those which remain regularly mown.

The primary outcomes were achieved and can be summarised as follows:

- Increased capacity in communities to support monitoring and data collection
- Improved vocational and transferrable skills for local people, and in particular the two placements
- Ability to demonstrate how changes in management practices impact the diversity of the project sites (see survey results in Appendix 1).

Placements:

The project funding enabled the appointment of two funded (bursary) placement positions. This provided an exciting opportunity for two people to learn vital skills around biodiversity/conservation monitoring, management of open spaces and community engagement.

The two placements were given extensive training around monitoring/surveying skills, community engagement skills and by the end of their placement were able to deliver community sessions on their own.

The two placements also greatly benefited from the project. Both felt the project increased their skills and understanding in the natural heritage sector and felt this increased their employability potential.

When asked to summarise their placement experience in a paragraph, this is what the trainees shared:

> I've learnt not only about the wildlife I've been lucky to spend time around but also about the working life of a conservation charity and my own work-life habits. Staff at AWT and the council have been superbly supportive and with their guidance I have decided that; Working on one thing at a time is super important, I should always set realistic goals at the start of each week and make time to get into the office. Learning for 9 months at this charity has been an amazing experience and I'm very glad to have this opportunity. I know now more about wildlife around the area and around the world and much more about life working in a charity focused on nature".
> Alfie Dickens.

> "I have found the project to be very educational. I have learned a lot about identification and my knowledge of native species has increased tenfold. Getting to see how the trust operates and runs events has also been an invaluable experience and will help me going forward in my career paths. I have enjoyed spending time in our green spaces, seeing the life they produce has been a joy".
> Arthur Blight-Mason.

Alfie and Arthur have both written about their personal journeys during their placements. These are part of the project's legacy, as they can inspire other young people to seek similar placement opportunities to further their knowledge and experience in nature conservation or if considering switching careers.

It can also provide evidence to potential employers of their skills and experience. Therefore, both personal journeys are available on the Blogs section on the North Somerset Rewilding Champions | Avon Wildlife Trust webpage.

Volunteers:

In total, **372 people** attended the **30 engagement events** delivered by the NSRC team between March and October 2022.

These engagement events included: the different biodiversity monitoring surveys (plants, pollinators and insects), the online ID training sessions, the Champions training with an external Ecologist tutor, and the community engagement events (e.g., bat walk, Big Worle Bash) occurred at different timings and during evenings and weekends.

139 volunteers attended the **70 surveying sessions** between April and September 2022, which meant **300 hours of volunteering** were accumulated by local people while monitoring their local nature.

By August 2022, **29 regular volunteers** from different North Somerset Towns (Weston-super-Mare, Nailsea, Portishead, Clevedon) were confirmed for the ongoing NSRC project.

Furthermore, **10** volunteers agreed to be **Champions** across the four Towns: Weston-super-Mare (2), Nailsea (2), Clevedon (3), and Portishead (3).

Champion groups were created to develop a supportive, self-sustaining learning and sharing environment that will encourage more people to join the project in the future. The Champion volunteers have been trained in surveying methods and species ID. They will also be encouraged to recruit new members from various backgrounds.

NSC intends to maintain engagement with the Champions to continue monitoring the sites to show biodiversity increasing over time. While in their local communities, the Champions are now equipped to spread the word and hopefully generate interest from other locals to join. As advocates, they should also pass their knowledge to the next generation of enthusiasts interested in these grassland areas, so NSC can continue getting good quality data about what's happening in the local habitats.

Survey results:

The reason for conducting surveys was to gather data to determine whether making changes to land management is improving biodiversity.

A regular survey calendar was compiled so that volunteers could familiarise themselves with the schedule. The first week of each month was focused on plant surveys, pollinator surveys in the second week, and sweep netting in the third week to record all other invertebrates. The days for each site were as follows:

Mondays – Loxton Road, Weston-super-Mare
Tuesdays – Elm Farm, Nailsea & Pound Lane, Nailsea
Wednesdays – Kilkenny Fields, Portishead
Thursdays – Hazell Close, Clevedon
Friday – Lynch Farm Park, Worle & Castle Batch, Worle

The rewilded sites were compared with those which remained regularly mown, so the surveys were carried out on mown areas too. Plant surveys and sweep netting were done adjacent to wilder sites, but for pollinators, they were done in a separate location so that results couldn't be influenced by pollinators passing to and from wilder sites.

Data recording sheets for each type of survey were created and used by the NSRC team.

Plants, pollinators and insects were surveyed across the sites. The team looked for:

- Species richness
- Evenness

These enabled the team to accurately look for and measure whether there was an increased biodiversity within the three survey categories.

Overall, it was found that the tall grass areas introduced as part of the rewilding project are showing increased biodiversity.

Communication:

The [North Somerset Rewilding Champions | Avon Wildlife Trust](#) webpage is one of the project's legacies, is linked to the NSC rewilding page, and hosts a number of training pages and blogs around the project.

In November 2022, a short film about the project, produced by Woven Films, was finalised. It features interviews with North Somerset Council staff, members of the Avon Wildlife Trust's North Somerset Rewilding Champions team and some of the North Somerset Rewilding Champions themselves, along with footage of the AWT staff and Champions out completing surveys. This film celebrates what the project has achieved, and it is hoped that it will encourage others to become Champions or to ask their local authority to begin their own rewilding project.

Link to the video: https://www.youtube.com/watch?v=1wqn3HMx7jQ

Conclusion:

In conclusion, NSC and AWT succeeded in connecting local people with nature on their doorstep by participating in monitoring surveys. The local communities have witnessed the positive impact that letting areas grow wilder can have on biodiversity. The North Somerset Rewilding Champions project has provided an opportunity for people to participate in some real citizen science, learn new skills and feel empowered to continue monitoring their local wildlife into the future

More information on the project can be found: https://www.n-somerset.gov.uk/my-services/libraries-leisure-open-spaces/parks-countryside/rewilding-north-somerset

Appendix 1 – Survey Results

Results

Plants

Species Richness

On plant surveys, the NSRC team and volunteers walked each site to draw up a list of all species present (species richness, R). Then they took a more in-depth look at the community composition by running a 20m **interrupted belt transect** with open quadrats placed every 2m.

Cuckooflower, Creeping buttercups, Ragwort, Yarrow, Broad-leaved dock, Curled-leaved dock, Wood dock, Knotgrass, Cat's-ear hawkweed, Bird's-foot trefoil, Common sorrel were recorded, to name a few examples of wildflowers. Other exciting plants found on the long grass were Bee orchids (*Ophrys apifera*) and Blue sedge (*Carex flacca*).

In each quadrat, the percentage cover of each species was estimated by volunteers, and this data was then plugged into Shannon-Weiner's Index. This is relatively straightforward as the sampling method means that the data is already in the form of proportions (that's the pi value for each species).

In grassland, counting individual plants is not feasible, so Simpson's Index of Biodiversity can't be used here.

Plant Species Richness (SR), which is just the number of species found, was always expected to be higher in the long grass. The average species richness in the long grass was 22.2 compared to 11.1 in the tree-planted area and 8.4 in the mown (Figure 1). The species on the mown grass must tolerate having their growth progress reset every two weeks when the mowers come around. The tree-planted area has the opposite problem, as it's never mown; the fastest-growing species, usually grass, takes over. However, these areas are being managed differently as it is the tree diversity which will provide long term biodiversity gains.

The plants that continued to occur in the mown areas are the deeply rooted ones, like Dandelions, Bindweed, and Hogweed.
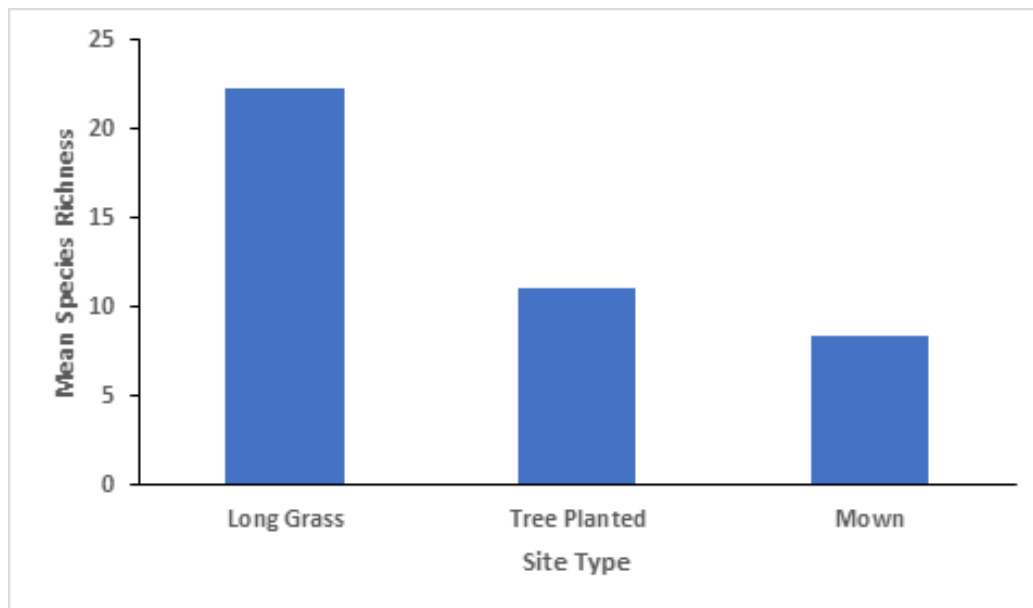
Figure 1. Mean Species Richness results from the plant surveys from June to October 2022.

Species Richness in transects

Figure 2 below shows that the transects run on the long grass had the highest species richness. However, the difference is not as significant as the main species richness graph. This makes sense as it's only a small sample of the site, so it limits how much of the site it can show. It was still higher on the long grass (SR: 6.9) when compared to the mown (SR: 5.8). This data would be very interesting if the transects were done in the same location on the upcoming surveys so that the data can be compared in the future. The regular volunteers know where they were done this year, so it should be easy for them to use the exact location rather than doing the transects elsewhere.
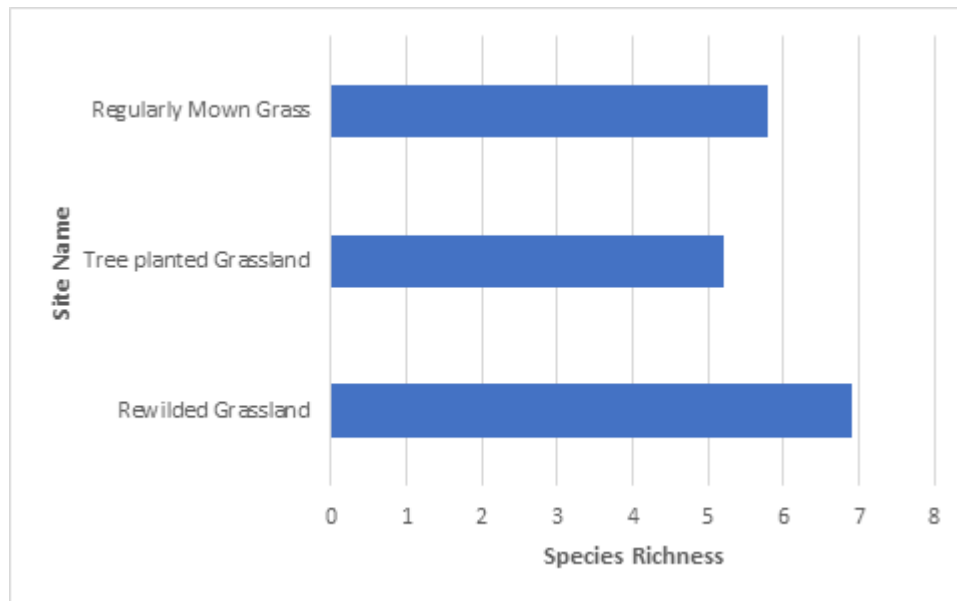
Figure 2. Mean Species Richness from within the transects.

Evenness

Evenness is high when all the species in the sample have the same abundance. The index ranges from 0 to 1, so when the index is closer to 1, it means that plant species are more equally spread in the sample (i.e., the transect area). When it is low, this means fewer species dominate the area of plants – for example, a quadrat with one species that covers >90% of the area will have a low evenness score.

Therefore, from this, we can conclude that the grass did take over the tree-planted area as the average evenness was much lower than the other two habitat types (Figure 3).

The long grass area has more variety of plant species but fewer individuals that are equally distributed.

The mown area has higher species evenness but lower species richness. So, in other words, it has less variety of plant species (mainly grasses, clover, dandelion), but they are distributed equally in the sample area (Figure 4).
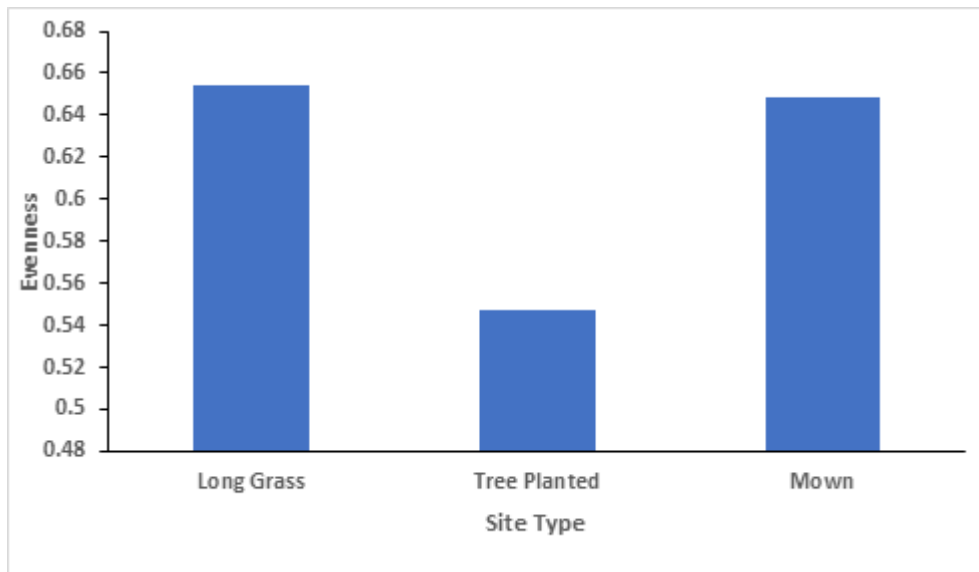
Figure 3. Mean Evenness results from the plant surveys.

Pollinators

For pollinators, the NSRC team did a slightly adapted version of the UKBMS methodology. Essentially, they selected a route across the site which took in most of it, then walked that route slowly and recorded any pollinators up to 2.5mon either side or up to 5m in front. These surveys were carried out on bright, warm days. Temperature, cloud cover and wind (light, moderate or strong) were noted too.

To explore the rest of the invertebrate life, they took samples using sweep nets. Sweep netting is a straightforward sampling method, simply swinging the net side-to-side, brushing through the vegetation for 30 seconds at a time, or around 25 sweeps from each management type (long grass, tree-planted and mown).

Buff-tailed bumblebees, Common carder bees, Honey bees, Red-tailed bumblebees, Hoverflies and on butterflies, Common blue, Small white, Gatekeepers, Small tortoiseshell, Brimstone, Marbled white and Comma butterfly have been recorded, to name a few pollinator examples. 17 different pollinator species were recorded in one day in June 2022 at the rewilded golf course in Portishead.

Species Richness

The species richness from the pollinator surveys did not have apparent trends (Figure 4). Kilkenny Fields is our biggest site and our highest-attended survey location, so it seems logical that a higher pollinator species richness was recorded.
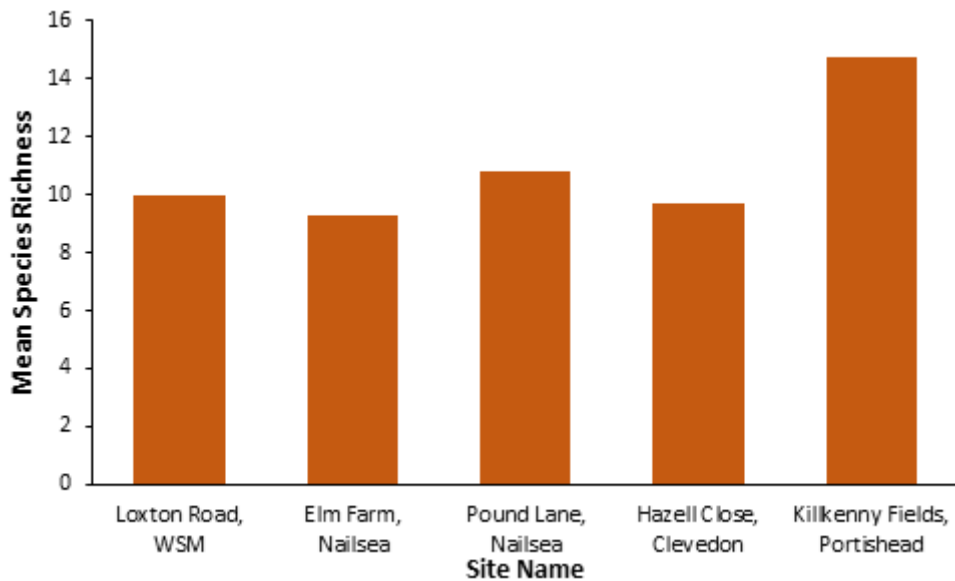
 Figure 4. Mean Species Richness results from the pollinators surveys, June-September 2022.

Evenness

Average species evenness was relatively equal across the different sites (Figure 5). The highest index value at 0.83 (Loxton Road, WSM) and the lowest at 0.68 (Elm Farm, Nailsea), having a difference of only 0.15.

Crow garlic (*Allium vineale*) was found at Loxton Road but nowhere else. However, this may not be related to pollinator evenness as flowering was not observed there.
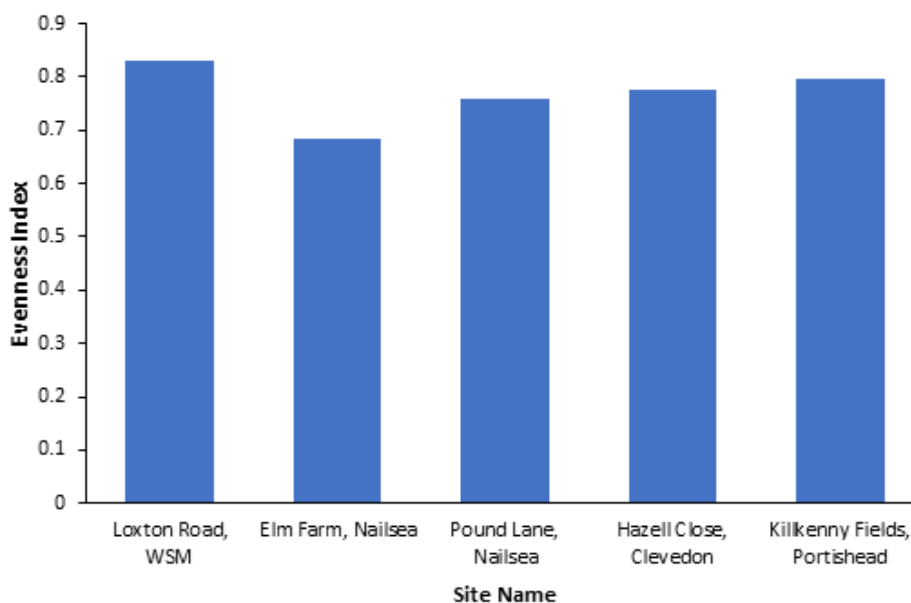

Figure 5. Mean Evenness results from the pollinator surveys.

Simpson's Index of Biodiversity

Pound Lane was shown to be slightly less biodiverse in terms of pollinators, and data showed Elm Farm was the most biodiverse (Figure 6).

This difference is not substantial, as the scale on the Y axis only ranges 0.18 points of the possible score (which can range from 0-1). However, it could have occurred due to several different factors. One idea is that it could be linked with a transect done in June where the NSRC team recorded a vast abundance of 69 Meadow brown butterflies that skewed the data to make it look less biodiverse. It was just a random chance that the team encountered so many Meadow brown butterflies (N=69) on that day in June 2022 in Nailsea. It could also indicate something about the site and what it is connected to. Maybe the Meadow browns were moving through from the Moorend Spout nature reserve near Pound Lane.

A possible reason for lower biodiversity at Pound Lane is that only one or two volunteers attended the session each month (more detail in the attendance graphs in the North Somerset Rewilding Champions Summer Report). So, fewer eyes on the ground data recording.
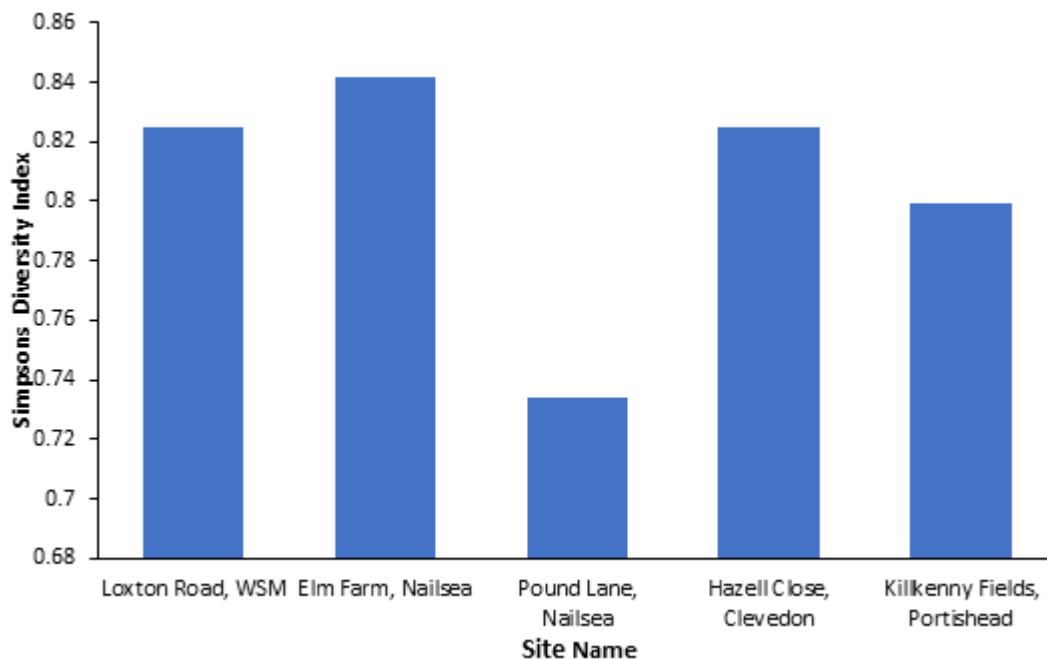

Figure 6. Mean Simpson's Index of Biodiversity results from the pollinator surveys.

Insects

Flea beetles, Dock leaf bugs, Meadow plant bugs, Crab spiders, Rove beetle and Weevils, and Yellowjacket wasps have been recorded in the rewilding sites by the NSRC team and volunteers, to name a few examples.

Species Richness

Sweep netting species richness was much higher in the long grass (SR:20.5) than the mown (SR:7.7), and the tree-planted value was between those (SR:15.7). This was likely due to the more varied plant life in the long grass providing more varied structure and food plants for the invertebrates (Figure 7).

We found a high abundance of flies in the mown grass but often not much else. Alfie D. suggested that if we recorded the exact species ID of every animal found, we could then show a graph of how many unique Orders were represented in that habitat type. This could indicate that the mown grass has much lower functional diversity, but many other tests are needed to confirm this.

By Identifying the Order, not the Species, we could be more accurate and show a more considerable difference in diversity when comparing mown areas and the rewilded sites.
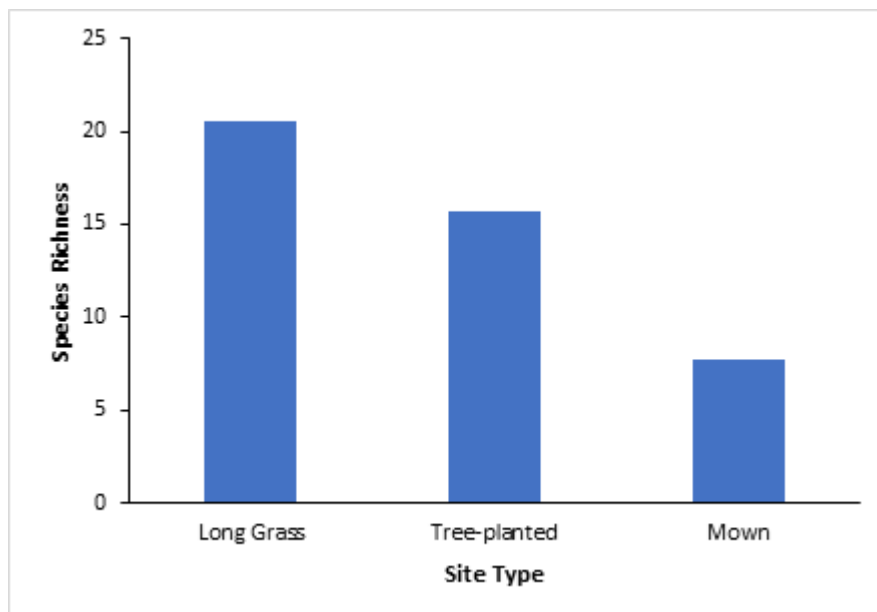

Figure 7. Mean Species Richness results from the insect surveys.

Simpson's Index of Biodiversity

The Sweep-netting surveys showed that the tree-planted and long grass sites, on average, had similar insect biodiversity (SI: 0.8, SI: 0.8) when compared to the mown, which was lower (SI: 0.6) (Figure 8).

The highest Simpson's Index was from the long grass sweep netting carried out in August 2022 at Elm Farm in Nailsea (SI: 0.9), which is really high considering one is the highest score possible. In that session, we found 55 individuals spread evenly across 20 different species.
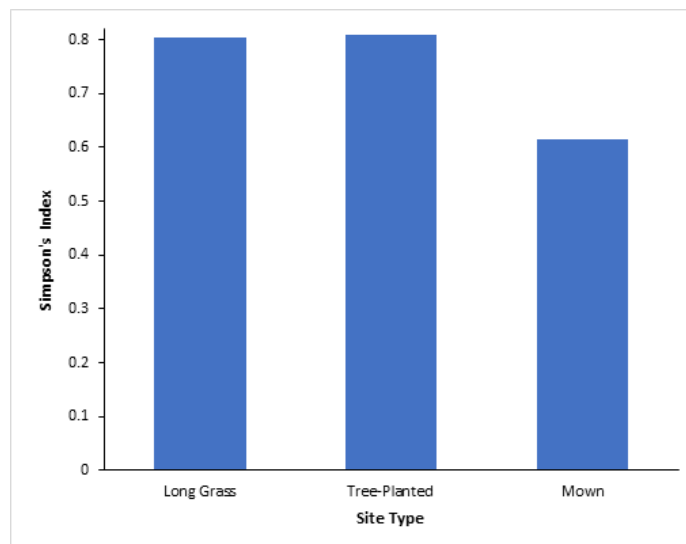

Figure 8. Mean Simpson's Index of Biodiversity results from the insect surveys.

Evenness

Species evenness from the sweep netting shows a similar trend to the previous two insect graphs (Figures 7 and 8). The mown area is less diverse (Figure 9).

The lack of varied plant structure likely causes the low evenness in the mown grass. On an anecdotal level, we found that most sweep nets from the mown grass contained only a few species (as described in the Species Richness graph, Figure 8) and a lot of the time, most of the individuals in the net were fly species.

It was frequently recorded that half or more of the individuals recorded on the mown grass were something we classified as a little black fly (or LBF). Maybe because flies are not really nectar pollinators, they don't need that food source. All the other insects like to hide in the grassland. The hot Summer we had this year also meant insects went underground, hiding from the heat. For example, in mown Kilkenny fields in August 2022, there were 62 invertebrates in our three sweep nets, and 45 of them were identified as LBF.
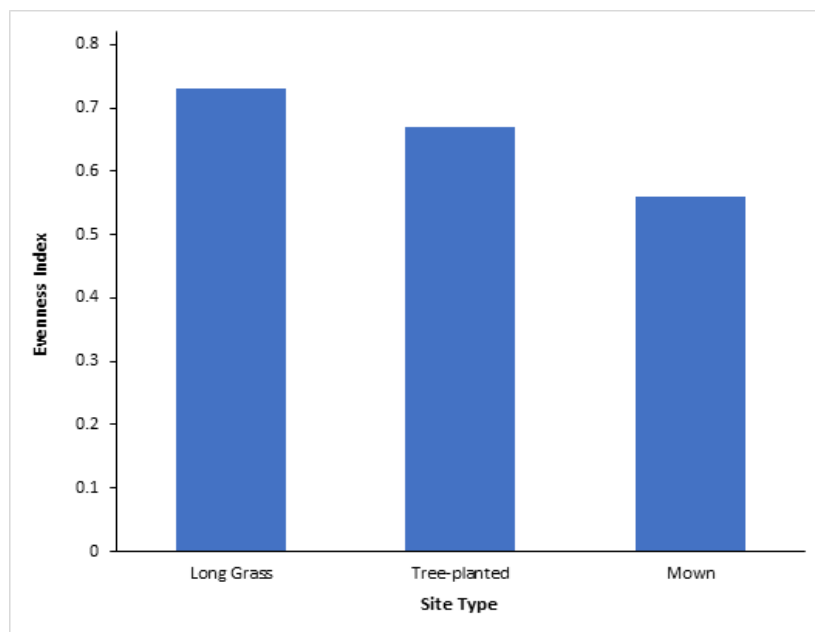

Figure 9. Mean Evenness results from the insect surveys.