

# Long-term botanical monitoring



Thank you for taking part in the Green Minds long-term botanical monitoring project. Plymouth has lots of green spaces and we aren't able to survey them all, which is how you can help. We're hoping to get an idea of how diverse the vegetation is across the city, which may highlight areas to us (either that are doing well, or that may need more attention). It will be really interesting to see how these sites change over time.

By taking an accurate grid reference for each quadrat, you can revisit the area to survey again, and keep records of any changes that happen over time.

## How to survey quadrats

Quadrats are a great way to be able to gain an idea of how species rich an area is, by looking at multiple quadrats (three, in this case). Quadrats need to be placed in similar habitats. So if there is a mown section and an unmown section, do three quadrats of the mown section and/or three quadrats of the unmown section.

To supplement the information, it's great to have a general species list too. This can include areas from outside the quadrats, in grassland or hedgerows. You don't need to survey an entire park, but focus on the section where you have placed your quadrats.

1. Pick your site
  - Find a park/green space close to you. Somewhere publicly accessible, or that you have permission to survey.
2. Prepare your kit
  - Make sure you have what you need. Guide books, apps on your phone, your quadrat measure, weather-appropriate clothing.
3. Health and Safety
  - Ideally go in pairs, or let someone know where you are if this isn't possible. Only do what you are comfortable with. Don't take any risks. Make sure you wash your hands after handling any plants.
4. Set your quadrat
  - Once you're at the survey site (eg a park) set out your quadrat. The easiest way to mark this is with string. Have a really good look at your 1m square and see how many plants you can identify. Remember, if you can't identify it, just describe it on the list. Grasses are very difficult. You can simply put "grass" down on your plant list.
  - Once you have had a really good look and a go at identifying the species, assign a % cover for each species. Include species you don't know and any bare ground with no plant cover.
  - Move on to your other quadrats and repeat.
5. Walkover survey
  - Simply walk around your site and take note of what you see. You don't need to ascribe any value (%) to the species, it is simply a list of what is present.
6. Send in your results
  - You can email your results to DBRC – please make it clear in your email that they are part of the Green Minds monitoring. Alternatively, you can submit them using iRecord. There is a Green Minds activity you can join on iRecord. The activity is for all records, from bees and butterflies to trees.
7. Re-survey
  - We would love each quadrat to be surveyed twice a year, each year, to help us build up the best possible data set. One in spring/early summer and one in late summer will pick up most of the species present.

Common species you will find:

Grasses:	Perennial rye-grass	Common couch
Cock's-foot grass	Yorkshire fog	Meadow grasses

Others:	White clover	Red clover
Yarrow	Common daisy	Dandelion
Other yellow composites	Ribwort plantain	Greater plantain
Creeping buttercup	Speedwells	Tufted vetch
Meadow vetchling	Bird's-foot trefoil	Other trefoils/clovers
Yellow rattle	Red bartsia	Black knapweed
Creeping thistle	Wild carrot	Docks and sorrels
Oxeye daisy	Nettles	Brambles
Navelwort	Red campion	Hogweed
Hemlock	Sow thistles	Spear thistle
Wood avens/Herb Bennet	Herb Robert	Lords-and-ladies
Wood sage		