

**Biodiversity is our planet's life support system. Restoring nature underpins the health and wellbeing of people and wildlife in a time of climate change.**



# **Wilder Verges**

## **Report summary**



**Brighton & Hove  
City Council**





## Why we are doing this project

In 2014 the wider Brighton & Hove region was globally recognised for the quality of our natural environment with UNESCO Biosphere status. In its position as lead partner of The Living Coast Biosphere, Brighton & Hove City Council has made a commitment to nature conservation, developing sustainably and learning from shared experiences.

In 2018 Brighton & Hove City Council declared a climate and biodiversity emergency to recognise and take action on the human-made effects greenhouse gases are having on our environment, and ultimately our way of life. Our declaration recognises the effect of climate change on nature with local, national, and global habitats and wildlife populations being driven to extinction at alarming rates.

In response to the emergency, the city made a commitment to becoming carbon neutral by 2030. Our ambitious programme recognises the importance healthy habitats and ecosystems play in absorbing and storing carbon and other harmful greenhouse gases, alongside providing havens for our beloved local wildlife, and helping reduce associated flooding and urban heat island effects.

The effects of a changing climate are increasingly being felt locally by communities with the summer of 2022 experiencing sustained periods of extreme heat and drought. This was followed by unseasonably mild weather and heavy rainfall deluges in autumn and winter including multiple Met Office weather warnings and local flooding issues.

The Wilder Verges project follows the UK's National Pollinator Strategy guidance which responds to UK insect declines and extinctions. It uses the latest knowledge and evidence to help us manage land, such as verges, to increase and connect-up beneficial plant life for insects, pollinators and wildlife.

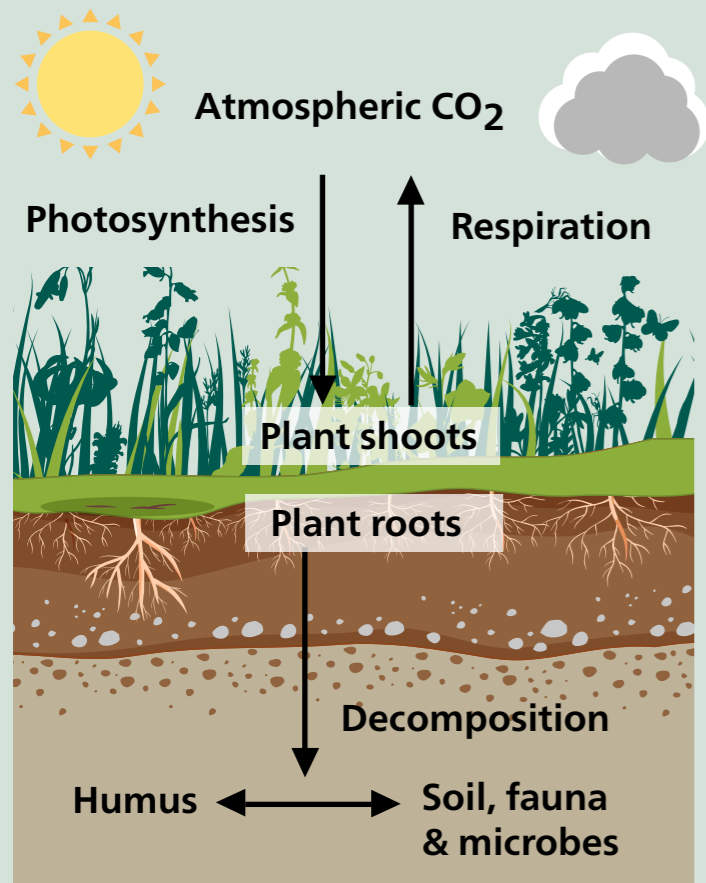
## What are Wilder Verges?

**Brighton & Hove's Wilder Verges project** is a trial to find out how managing verges in a different way can improve their wildlife and biodiversity. The project included piloting a no-cut approach on over 20 verge sites within the city.





## Carbon balance within the soil



Letting grasses and wildflowers complete their natural flowering and die-back cycles, without cutting them back prematurely, captures greater atmospheric carbon through their natural process of carbon capture (photosynthesis) which creates greater organic content flows into the ground promoting healthier soils.

## What do we know already?



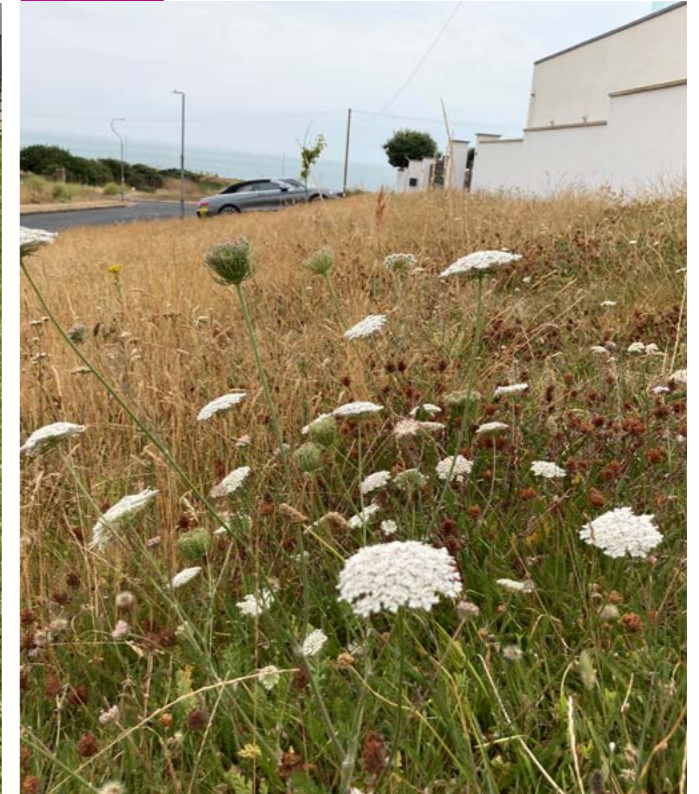
We can help biodiversity by simply changing the management of local habitats to promote and encourage flowering plants.

Moving away from overcut short mown areas is a well-documented method of providing food and shelter for wildlife, not to mention helping to keep our urban landscape cooler during heatwaves for residents, and reducing surface water flooding.

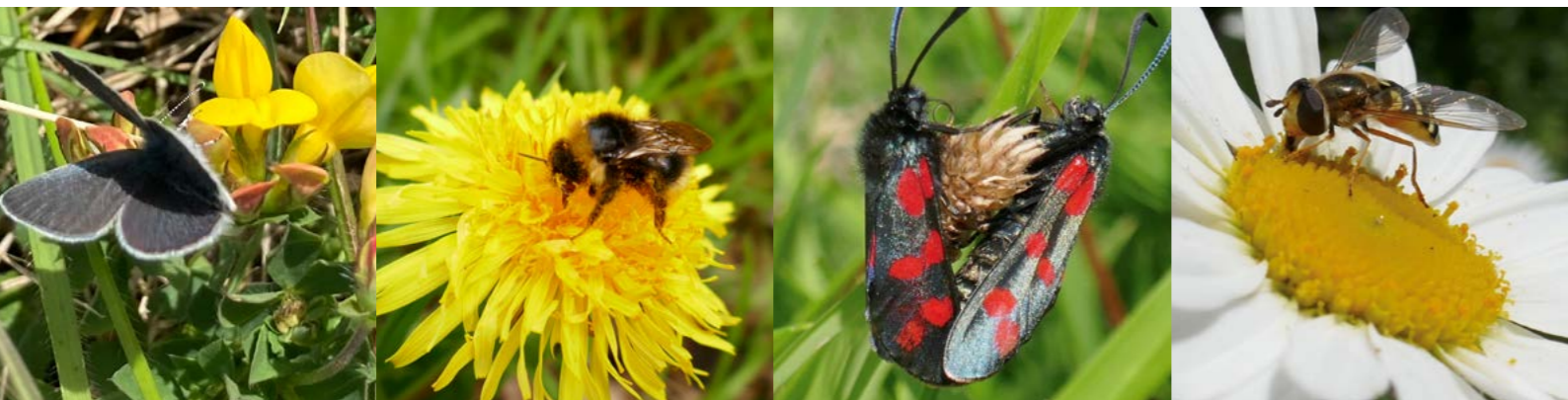
Before



After



Roedean Vale verge 2022.



Locally, a study in **Saltdean Park** (from 2013) showed that flowers and flower-visiting insects **increased by 3 to 5 times** through reduced mowing compared to regularly mown areas, with the presence of insects **50 times greater** in the long grass compared to the short grass.







## Setting the scene

In 2010, the Lawton Report confirmed the critical need for 'Making space for nature - bigger, better, joined up' due to drastic declines and extinctions of populations documented.

Local projects reinforcing the Lawton Principles have included mapping key areas that represent Biodiversity Opportunity Areas BOAs and Nature Improvement Areas NIAs within the city.

BOAs – are defined in a project led by the South East Biodiversity Forum in 2008 which identified within Brighton & Hove chalk grassland management, restoration and creation, and urban biodiversity as the key opportunities for nature.

NIAs – were established to create joined-up and resilient ecological networks at a landscape scale as funded by the Department for the Environment, Food and Rural Affairs (Defra) and Natural England.

**A significant Brighton & Hove NIA project called 'Town to Down' involved the creation of 19 B-banks (butterfly, bee and biodiversity banks) and wildlife corridors. In a monitoring survey of the banks undertaken in 2021, c.10 years on, the evidence is clear that these areas support incredibly high and specialist fungal, floral and faunal life:**

***"The fact that 745 species can be found in only 1.26 hectares is an incredible success for Brighton & Hove City Council. With 58 invertebrates with conservation status too, the project should be considered an incredible success"***

2021 survey report by local entomologist Graeme Lyons.

## Everything works better when it is connected

All of the **23 verges**, covering a combined area of over 90,000 square metres, are within 300 metres of recognised NIAs. With 17 of the verges within or next to BOAs.

**They directly link-up with many of the B-Banks**, as shown on the map, which were created to provide habitat for pollinating insects such as bees.

They help make more continuous wildlife corridors joining up with the 'City of Meadows'. This project involved pupils, staff and parents from 30 Brighton & Hove schools across the whole city, creating micro, mini or medium meadows in their school grounds during 2022.

## What we did

We provided a simple form for use by community volunteers who surveyed 25 verges across the city in August 2021.

The citizen scientists helped collect information on plant species present during standard mowing regimes i.e. the verges were kept short and were frequently mown.

Out of the 25 verges identified, 23 were kept uncut during the 2022 growing

season from March to September.

We then did a follow up monitoring visit during August and September 2022 using the same survey form for direct comparison.

The Wilder Verges Project was funded by Natural England to pilot better management of verges for the benefit of wildlife and plants.

## Limitations/Constraints

- A single survey date in August and September gives a snapshot of plant-life in the later part of the growing season. Early season plants may be missed or no longer present, however, it does give a general indication.
- The extreme heat and drought period during the summer of 2022 had a major impact on species presence and abundance, as many plants died off due to the weather and were unrecordable.
- Surveys have been undertaken by members of the local community / citizen scientists. They have varying levels of plant species knowledge and identification skills and are not professional ecologists or botanists. Therefore there may be a small degree of error with plants being misidentified or not recorded.
- The verges are affected by varied local conditions including public access, car parking, trampling, litter, dogs etc. This included construction of a new cycle path at the Ditchling Road verge, gas pipe installation works on the South side of A259 between Brighton Marina and Rottingdean Village which significantly altered the plants present. Also car parking issues at Tenantry Down Road triangle.

## Headline results of letting the plants grow

**The survey information shows us that:**

- **Nearly half (48%)** of the sites saw an increase in pollinator or downland species present (11 out of the 23 sites);
- **10 out of 23 sites (43%)** saw the amount of pollinator species increase from 2021 (short mown) to 2022 (unmown during the main flowering season); and
- **70% of the verges (16 out of 23)** recorded a pollinator or downland species not seen as present in the 2021 survey.





## What we have learnt

The pilot has helped biodiversity by allowing plants to flower, complete their lifecycle, set-seed and provide connectivity, food and shelter for insects and wildlife including insect-eating birds such as starlings.

Verges when added together cover a substantial area of unused and unbuilt land. The 23 verges included in the pilot, which includes small triangular areas, and thin strips alongside the road network, added up to over 90,000 square metres equivalent to over 20 acres. This makes a worthy contribution to connecting-up the landscape, as identified NIAs and Biodiversity BOAs, helping create a local nature recovery network and joining up to other valuable wildlife projects such as the City of Meadows schools project and 'Town to Down' B-banks.



Photo credit Steve Gelliot

It is important to highlight that a year is a very short amount of time in natural systems and their recovery, and we need to recognise our pilot represents a tiny snapshot. Monitoring and using the information to tailor management prescriptions is important in the longer term with further analysis of results, for example, the effect on soil nutrient levels from the roads – such as salt and pollution.

We received both compliments and complaints from residents about keeping the verges unmown, and will use this information for further analysis, looking at the specific locations and cutting frequencies, more education and increased community engagement. We can also use the information to see where plant species have decreased, which ones, and for what reason such as weather or dominant species impacts.

Diversity is the key within all landscape management regimes, and this includes not doing the same everywhere.

There are always compromises to be made, for example on larger verges such as Brangwyn Way, part of the verge can be cut short (maybe the edges) with the other part left longer, creating greater localised microhabitats. Management and cutting frequencies may need to be designed and tailored to maximise biodiversity, taking into account staff capacity and making management as simple as possible to carry out.

Increased monitoring visits across the flowering season would help to gain a more accurate picture of the species especially considering this year's extreme heatwaves and drought which saw a lot of plants dying off in July and August. However, this comes with additional volunteer time requirements which may be unrealistic.

A closer look and more methodical recording of insect life would be a useful biodiversity health indicator, although this comes with specialist entomological expertise and knowledge requirements.

## Key pollinator/ downland species

The table below lists the species planted on the B-Banks project for their value as chalk grassland and wildlife beneficial pollen and nectar food sources. The bold green text are those plants recorded on the Wilder Verges:



<b>Kidney vetch</b>	<b>Greater knapweed</b>	<b>Ox-eye daisy</b>
Horseshoe Vetch	<b>Ladies Bed Straw</b>	<b>Red clover</b>
<b>Birds foot trefoil</b>	<b>Hedge bedstraw (minimally)</b>	<b>Wild carrot</b>
Small scabious	Cowslip	Nottingham Catchfly (minimally)
<b>Field scabious</b>	Lesser hawkbit	Wild Basil
<b>Self heal</b>	Bladder campion	Common centaury
<b>Common Toadflax</b>	<b>Common/Lesser Knapweed</b>	Moth mullein (minimally)
Harebell	<b>Rest harrow</b>	Yellow chamomile (minimally)
<b>Wild marjoram</b>	<b>Campion white</b>	Dropwort

The verges that showed the largest increase in species recorded from 2021 to 2022 were:

- **Park Manor, London Road Corner** which recorded an increase of 16 species in 2022 compared to 2021. We found 3 species not recorded in 2021 and an increase in selfheal and scabious – very important native insect food plants
- **Chartfield, Hove** had an increase of 10 species in 2022 compared to 2021
- **The south side of the A259** (which is part of the designated Site of Special Scientific Interest) saw an increase of 10 species in 2022 compared to 2021 with 1 new pollinator/chalk species not recorded in 2021 and an increase in abundance of hawkbit and common sea lavender, important native / coastal plant species

- **King George VI Avenue** (also known as Snaky Hill) we found a very low plant count of 2 species in 2021 due to the survey being completed after recent mowing. After being left unmown, the 2022 survey, recorded 14 species including lesser knapweed a very beneficial native pollinator/ downland species.

A full breakdown of the results for each of the verges can be provided on request by emailing [CityParks@brighton-hove.gov.uk](mailto:CityParks@brighton-hove.gov.uk)







## What's next?



We hope to continue fitting the pieces of the puzzle together by connecting-up the landscape for biodiversity wherever possible. This includes managing verges and any suitable areas of land for nature's recovery.

We want to expand the pilot by working with communities and stakeholders to identify suitable locations which link-up with other current projects and initiatives including:

- ✿ **Nature Recovery Networks and our Local Nature Recovery Strategy;**
- ✿ **Changing Chalk projects such as Wilding Waterhall, Greening the Cities and the Local Wildlife Sites Initiative;**
- ✿ **Our City, Our World schools programme including projects such as City of Meadows;**
- ✿ **Wildflower Wards such as Hollingdean;**
- ✿ **Housing land and estate management;**
- ✿ **Cemeteries, parks and green spaces;**
- ✿ **Our City Downland Estate Plan**

### Two key areas of consideration moving forward are:

- ✿ **Increasing public engagement** and understanding, working with members of our communities, local groups, housing tenants and schools etc – enabling local selection and ownership of areas and verges with local community monitoring and management long term; and
- ✿ **Cuttings** - The single annual cut can generate an increased amount of cuttings (or thatch) as the vegetation is longer, which if left on the verge can add additional nutrients. These nutrient-rich conditions favour some of the more nutrient-loving plant species. This can have the knock-on effect of certain nutrient-loving species becoming dominant and lowering the overall species-richness. Further thinking about how best to manage the grass cuttings is required. Possible options include use for tree planting mulch, link-up with local composting schemes, and making habitat piles in appropriate locations. Sowing yellow rattle, which is a plant that is semi-parasitic on grass species, may also help. The join-up on the community engagement side is likely to support with management of this and other options.

## Did you know?

- ✿ Nature is good for our health and wellbeing - it boosts the immune system, helps to lower stress, and brings much needed joy and happiness into our lives.
- ✿ Naturally managed grasslands slow, trap and absorb heavy rainfall, helping reduce surface water flooding.
- ✿ Longer vegetation helps to hold moisture and reduces evaporation of water lost to the air by wind and heat. This keeps urban landscapes cooler in the heat of the summer.
- ✿ The Centre for Ecology and Hydrology estimated 1.3 billion kg of air pollutants were removed by grasslands, woodlands, plants and other UK vegetation in a 2015 study, which saved the UK around £1 billion in avoided health damage costs such as lung and heart related hospital admissions.
- ✿ Plants can tell you a lot about the health and condition of our soils, for example, nettles tell us of the presence of very fertile or

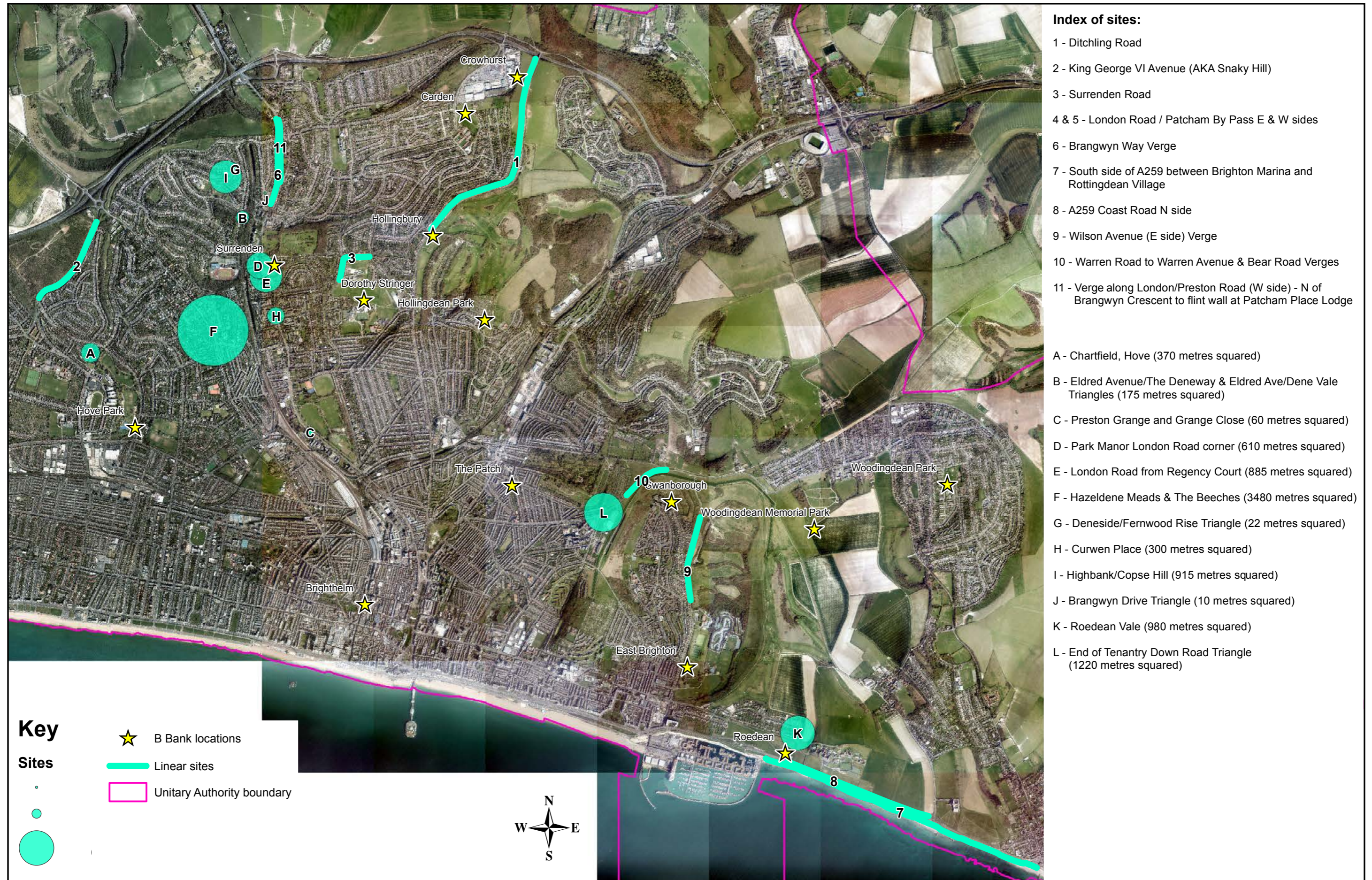


nutrient rich soils, and the presence of fungus tell us of healthy soil microbes.

- ✿ “Plant Blindness” is a recognised phenomenon of our inability to see plants as wildlife and to distinguish between plant species. The term has been around for over 20 years and identifies the underappreciation of all the things nature does for us for ‘free’ such as cleaning our air, taking carbon and pollution out of our atmosphere, reducing flooding, cooling our urban areas, providing us with joy, food, materials etc.



# Wilder verges locations





# Information and Resources



## Brighton & Hove City Council

[www.brighton-hove.gov.uk/climate-change/local-biodiversity](http://www.brighton-hove.gov.uk/climate-change/local-biodiversity)

## B-banks Survey -

<https://thelivingcoast.org.uk/wp-content/uploads/2021/07/Brighton-B-Banks-survey-2020-final.pdf>

## Brighton & Hove's Wildlife Forum

[www.bhwf.org.uk](http://www.bhwf.org.uk)

## Buglife B-lines

[www.buglife.org.uk/our-work/b-lines/](http://www.buglife.org.uk/our-work/b-lines/)

## Changing Chalk Partnership

[www.nationaltrust.org.uk/visit/sussex/the-changing-chalk-partnership](http://www.nationaltrust.org.uk/visit/sussex/the-changing-chalk-partnership)

## Environment Agency - Working with nature - Chief Scientist's Group report July 2022

[www.gov.uk/government/publications/working-with-nature](http://www.gov.uk/government/publications/working-with-nature)

## International Union for Conservation of Nature (IUCN) - Species and Climate Change

[www.iucn.org/resources/issues-brief/species-and-climate-change](http://www.iucn.org/resources/issues-brief/species-and-climate-change)

## Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) -

[https://ipbes.net/sites/default/files/2018\\_eca\\_full\\_report\\_book\\_v5\\_pages\\_0.pdf](https://ipbes.net/sites/default/files/2018_eca_full_report_book_v5_pages_0.pdf)

## Local Nature Recovery Strategies DEFRA

[www.gov.uk/government/publications/local-nature-recovery-more-information-on-how-the-scheme-will-work/local-nature-recovery-more-information-on-how-the-scheme-will-work](http://www.gov.uk/government/publications/local-nature-recovery-more-information-on-how-the-scheme-will-work/local-nature-recovery-more-information-on-how-the-scheme-will-work)

## Making Space for Nature – Lawton Report

[www.gov.uk/government/news/making-space-for-nature-a-review-of-englands-wildlife-sites-published-today](http://www.gov.uk/government/news/making-space-for-nature-a-review-of-englands-wildlife-sites-published-today)

## Met Office

[www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/joint-hottest-summer-on-record-for-england](http://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/joint-hottest-summer-on-record-for-england)

[www.metoffice.gov.uk/weather/climate-change/causes-of-climate-change](http://www.metoffice.gov.uk/weather/climate-change/causes-of-climate-change)

## National Pollinator Strategy - UK Government

[www.gov.uk/government/publications/national-pollinator-strategy-for-bees-and-other-pollinators-in-england](http://www.gov.uk/government/publications/national-pollinator-strategy-for-bees-and-other-pollinators-in-england)

## Nature Recovery Networks - UK Government

[www.gov.uk/government/publications/nature-recovery-network](http://www.gov.uk/government/publications/nature-recovery-network)

## Office for National Statistics (ons.gov.uk)

<https://www.ons.gov.uk/economy/environmentalaccounts/articles/ukairpollution-removalhowmuchpollutiondoesvegetationremoveinyourarea/2018-07-30>

## Our City, Our World - Brighton and Hove Climate Change, Sustainability and Environmental Education Programme

[www.ourcityourworld.co.uk](http://www.ourcityourworld.co.uk)

## Plantlife

[www.plantlife.org.uk/uk/our-work/publications/good-verge-guide-different-approach-managing-our-waysides-and-verges](http://www.plantlife.org.uk/uk/our-work/publications/good-verge-guide-different-approach-managing-our-waysides-and-verges)

## RSPB – UK's State of Nature Report

[www.rspb.org.uk/our-work/state-of-nature-report/](http://www.rspb.org.uk/our-work/state-of-nature-report/)

## The Living Coast, UNESCO World Biosphere Region

[www.thelivingcoast.org.uk](http://www.thelivingcoast.org.uk)

## UK Government

[www.gov.uk/government/news/public-urged-to-help-bees-butterflies-and-other-pollinators](http://www.gov.uk/government/news/public-urged-to-help-bees-butterflies-and-other-pollinators)

## Wilding Waterhall

[www.brighton-hove.gov.uk/libraries-leisure-and-arts/parks-and-green-spaces/wilding-waterhall](http://www.brighton-hove.gov.uk/libraries-leisure-and-arts/parks-and-green-spaces/wilding-waterhall)





