

Introduction

This document will provide you with a range of nature-based (and other) solutions for helping to increase the biodiversity of your school grounds.

Here we provide you with an overview of the types of solution you could add to your grounds. You can use this information to help you plan changes to your grounds to help solve your water management issues.

Some of these you will be able to implement yourselves but other may require additional professional advice including whoever maintains your grounds.

Improving habitats

The National Education Nature Park habitat surveys will help you to identify which habitats you already have. There will be links to each habitat in the information below. Across your site you will have a range of habitats, some will support a wide range of wildlife whilst others might be managed in a way that is ideal for sport, for example, but not so good for wildlife.

When considering how to maintain different habitats, it is important also to consider the use of each area of your grounds. Often changes can be made that accommodate both nature and people, but sometimes their functional use by people may be a higher priority. So, you will need to make decisions that are right for your school.

Below we have set out the most common habitats in school grounds and indicated some of the different ways those habitats can be managed for wildlife. At the end of this document, we have also provided you with links to resources to help you plan, make and manage those habitats.



A word on appearance

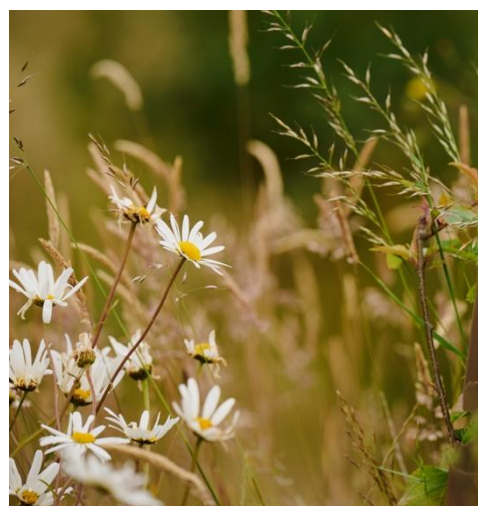
Many school grounds are maintained as you would a golf course - mown grass, simple and as neat as possible. A move to a space which is richer in nature, more engaging for play and which provides a broader learning experience tends to mean a move to a wilder, more natural look.

We recommend a conversation and plan with parent council about how this is communicated to everyone, that the school is being positive about nature and will look wilder in future.



A word on maintenance

Many school maintenance contracts are issued with a focus on speed and cost. It is important that before you start any changes to improve nature in your grounds, you speak with the person in charge of the contract and the contractor to discuss plans. Your contractor will have to consider different ways of maintaining spaces, reducing reliance on large lawn mowers every two weeks, and moving towards some more pruning, strimmer's and seasonal cuts, as well as awareness for their staff team.



We would recommend that you have a conversation about banning pesticide and herbicide use in the school grounds. Most pesticides are lethal for the wildlife and many plants you are looking to draw in, and they are not good for our children's health either.

Hard surfacing

School playgrounds are usually made of asphalt (also known as Tarmac) and may well have paths also made of the same material. You may also have other areas of hard



surfacing such as paths made of paving slabs. These surfaces are impermeable and can get very hot in the summer months.

Even these hard surfaces can have space for nature – between the paving slabs, where there are cracks in the paving or at edges where they meet walls. Usually people will see these as ‘weeds’ – which is just a plant in the wrong place – and try to remove them, often using pesticides. One option, however, is to let these grow if they are not causing a problem. These will be little oases for invertebrates. Using pesticides also has an impact on all wildlife in your grounds so try to avoid these if you can.

You can also add a range of features to your hard surfacing. You will need to consider the other ways the space is used but often there is more asphalt that you need for sport and play so it is likely that you will be able to add nature even to these barren spaces.

The National Education Nature Park provides guidance on six different ways you can develop grey areas – in [‘Change grey to green’](#). Whilst this has been written for English schools, the advice and information is suitable for all UK schools and will help you plan that change.

The six different changes are: (see below for links to ‘how to’ guides)

1. Pools of water – how you can add small container ponds with plants
2. Waves of grasses – adding grass and meadow plants to grey areas
3. Buffets of flowers – adding raised beds or planters with fruit, vegetables and flowers
4. Shade of trees – considers digging up a small area of hard surfacing to plant a tree
5. Cascades of green walls – how vertical planting can encourage nature
6. Catch every raindrop – information on installing water butts



Grass

[Mapping your grass and wildflower habitats](#)

Before you plan changes to your grass, survey the grass you already have and map the different areas of grass and wildflower habitats on your site.

Why change your grass?

As well as improving the biodiversity of your site by creating habitats and food sources for a wide range of wildlife, having a species-rich grassland will help you to maintain a healthy soil which is key to capturing the greatest amount of carbon. Long grass can also help to cool down your site, particularly in urban areas.

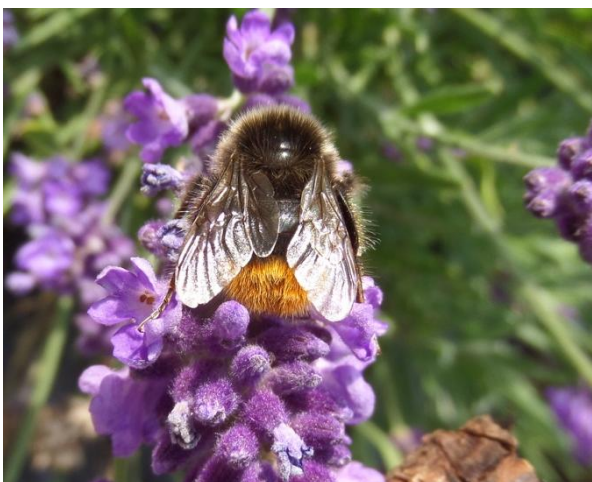
Sports fields/pitches

Your school field is usually the largest grass area of your grounds and there may be specific maintenance requirements of the grass for your pitches depending on the sports you play and at what level. Your sports fields are also likely to get heavy use, and so the grass species used will favour durability over all the other benefits that longer or more varied grass can bring. Sports fields are also mown 10-14 times a year, to maintain a 'mown grass desert'. Unfortunately, in most schools all grass areas are treated the same as sports pitches.

Improving the diversity of your grass

Immediately around pitches however we can look at using different grasses, shrubs or even trees. In many schools there are odd-shaped patches of land or 'orphaned' land between pitches and boundaries, and these are ideal for stopping mowing and creating grassland or herb rich meadows. You may also have large areas of grass which are undefined, for play at breaktime. By consulting carefully and thinking creatively you may also find you have areas of this grass which can be improved for climate and nature.





Stopping mowing

Stopping mowing is the simplest way of getting longer grass. Many species of flowers, herbs or legumes can survive for decades in soil, even with mown grass over the top. However, not mowing tends to allow the existing species and dominant species to take over.

Changing mowing patterns

Reducing how many mows a year is also an option. This sounds like it will cost you less, however it may require a different mower, timings and the need to take away the 'arisings' (grass clippings) after an autumn cut. Changing mowing patterns does, however, encourage different species and so is more effective than just stopping mowing.



Actively improving grass areas

By actively planting a grass area with more species, we can dramatically change the nature and climate adaptation value of the space. You may need to take the grass back to bare earth, or you may be able to slowly add species into existing grass while altering the mowing regime at the same time. To 'over sow' you will still need to rake or scarify back



until you can see bare earth between grass. By adding seeds, plant plugs or bulbs to an already grassed area you will dramatically increase the diversity. You can do this in patches, and you can mix techniques in different areas. See our guidance on grasslands at the end of this advice sheet.

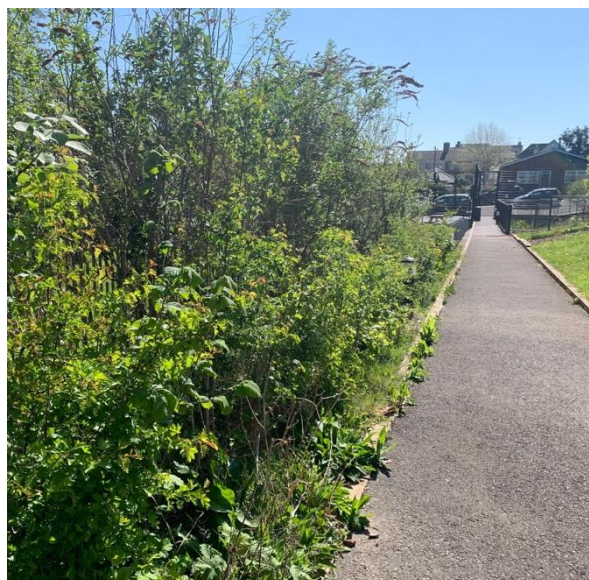
Trees, hedges and shrubs

Before you plan changes to your existing trees, hedges or shrubs, you must map the different areas of trees and woodland habitats you already have on your site. There are some useful mapping tools to help you, such as

<https://www.educationnaturepark.org.uk/resource/mapping-tree-habitats>

Shrubs and hedges

These are often overlooked in favour of tree planting, but in fact shrubs and hedges can initially create more opportunities for wildlife and other plants. They often grow faster and establish well before trees can begin to mature, which is when a tree is most helpful. Hedges also create useful boundaries and barriers, while slowing winds, blocking pollution, creating privacy, and creating deep shaded areas. The right hedge can also provide a useful security boundary with a density of twigs and perhaps some spiky thorns!



There are a few main options when thinking about hedges:

- Mixed species hedges provide year-round interest, and often grow to different heights and widths, providing flowers in spring, colour in the autumn and a variety of habitats for bugs and birds.
- A single species hedge looks more regular, and typically these are species such as beech, hawthorn or cypress. They are also more straightforward to maintain.

- Evergreen hedges are excellent if you want constant greenery – with the privacy and shelter they provide year-round. Do take advice as a few of the common evergreen hedges require more thorough and regular maintenance (such as leylandii) or have a level of toxicity (such as laurel or yew) which is not appropriate in school grounds. Western red cedar, Griselinia, Holly, Hawthorn or Hornbeam are good options instead.

Take local advice and have a look at our ‘How to’ guide on planting hedging as you decide where to install a hedge and what type it will be.

Note that Woodland Trust (<https://www.woodlandtrust.org.uk/>) will provide hedge packs to schools, and have some options for bigger packs of hedging if you can connect to wooded areas through the MORE hedges scheme.

Shrubs

Shrubs, like hedges, can be excellent providers of food and shelter for wildlife, while also providing lower windspeed and a greater diversity of bugs and birds on your site. Again, take local advice about your soil type, location and species choice for your site. Many school sites have corners and ‘orphaned’ spaces which are ideal to plan a few shrubs, many of which do not require much maintenance. Again, a good choice of shrub can provide year around interest.

Planting new trees

Trees come in all sorts of shapes and, ultimately, sizes and it will depend on where you want to plant them and what you want them to add to your grounds. Here we are looking at how planting trees can increase biodiversity. By planting in groups, ideally with space around them to grow and allow plants below to thrive, you can increase the benefits of trees significantly. However, there is also a case for planting individual trees or lines of trees to achieve benefits such as shading or aesthetics.

As a general rule, native trees support more wildlife than non-native trees but there are exceptions. The [Woodland Trust](https://www.woodlandtrust.org.uk/) has a list of its 10 best trees to attract birds and other wildlife and are all native to the UK.



It is also worth considering an orchard. These take a bit more planning and maintenance, but offer a wonderful learning experience and food source for pupils to learn about each year.

The Woodland Trust and the Tree Council will both supply free trees to your school, as well as some more advice about where and how to plant them.

<https://www.woodlandtrust.org.uk/plant-trees/schools-and-communities/>
<https://treecouncil.org.uk/grants-and-guidance/our-grants/orchards-for-schools/> and
<https://treecouncil.org.uk/grants-and-guidance/our-grants/branching-out-fund/>

Tredges

Combining trees and shrubs is an excellent way of maximising the benefits from planting. Tredges (tree-hedges) means lots of different heights and changes through the season, interest at ground level and above, and a more resilient planting scheme which is often better suited to our changing climate.

Woodland edges

Creating a 'woodland edge' combines grasses, plants, flowers, shrubs and trees into an excellent area for wildlife, with many climate adaption benefits too.



You can plant to replicate this structure by planting trees in the inside of your wood, then shrubs moving outwards, herbaceous plants and long grass. You can add climbers such as ivy and honeysuckle as the trees grow, ground flora including bulbs and finally add man-made habitats such as bird and bat boxes.





Ponds and wetlands

Ponds and wetlands will bring wildlife to your school grounds. There is link to guidance on adding a pond or rain garden at the bottom of this document and as well as on the Wildlife Gardening website (link at the bottom of the page). Guidance on maintaining damp places, including ponds in the Polli:Nation maintenance guide.

Make sure you consider how to control access to the pond area, providing a dipping platform or other flat surface alongside it, somewhere for pupils to work at and somewhere to store your pond dipping equipment.



Artificial wildlife habitats

Artificial habitats can encourage wildlife to live in your grounds. These include bird and bat boxes, bug hotels hedgehog homes and log piles for other invertebrates. You can find information on creating man-made habits on the Wildlife Gardening Forum website (link below) as well as on many wildlife organisation websites.

Please note we recommend only creating these shelters if there are food sources and suitable habitats nearby. Suitable habitats are the meadows, grasslands, shrubs, hedges or trees listed in this guide.



Bare ground

You may not have thought about bare ground as being a wildlife habitat but they can actually be an important habitat for many solitary bees. They like sunny spots so look out for small holes where you have bare earth in these places. There are around 250 different species of solitary bees in the UK and they can't sting you so are a great addition to your grounds.

Some 'How to' guides to help you increase nature and improve the ecosystems that make up your school grounds.

- The Wildlife Gardening Forum has a range of How to guides that will help you develop [different habitats](#) within your site. Whilst designed for domestic gardens the information is equally applicable to school grounds.
- The [Ltl Polli:Nation maintenance guide](#) has a section on managing trees, hedges and shrubs as well as a section on orchards, meadows, damp places, man-made homes and flower and vegetable beds. It describes when to undergo different management processes, why you are doing them and who could be involved in that process.
- The [National Education Nature Park](#) is producing guidance on developing a range of habitats including ponds and other water features. Further guidance on other habitats will be added in the years to come. In '[Change grey to green](#)' you will find the following 'how to' guides:
 - [Pools of water](#) – how you can add small container ponds with plants
 - [Waves of grasses](#) – adding grass and meadow plants to grey areas



- [Buffets of flowers](#) – adding raised beds or planters with fruit, vegetables and flowers
- [Shade of trees](#) – considers digging up a small area of hard surfacing to plant a tree
- [Cascades of green walls](#) – how vertical planting can encourage nature
- [Catch every raindrop](#) – information on installing water butts
- Also from the National Education Nature Park there is information on how to [‘Add flower -rich grassland’](#) and how to [Add a pond or rain garden.](#)
- There are also CS180 specific how to guides on trees, hedges and shrubs:
 - Tree planting in schools
 - Orchards
 - Hedge planting in schools

