

## Additional resources:

# Can the world ever be completely free from pollution?

### Enquiry Question Exploration

**Below are some concepts which may arise from discussion and activities. You can use the questions to facilitate dialogue.**

**Pollution:** Has there always been pollution? What would a world without pollution look like? Should everyone know what pollution is? Would we have to give up too much to remove pollution?

**Climate problems:** How do the climate problems make you feel? Should everyone know about the climate problems? Is it ever too late to solve a problem? What small steps can we take to help the climate problems?

**Positive action:** Is positive action effective? What if we all took positive action?



### Prepare

Sheffield General Cemetery is designated as a Local Nature Reserve (by Natural England) and a Local Wildlife Site (by Sheffield City Council). It is a significant area of semi-natural habitat close to the city centre and connected directly with the Porter Valley wildlife corridor. The site includes a variety of vegetation and habitats which contribute to its biodiversity. These include grassland, woodlands, mature trees and garden and wildflower areas. Some areas are fenced off as they provide vital feeding and nesting habitat and a refuge from disturbance by dogs and people visiting the Cemetery.

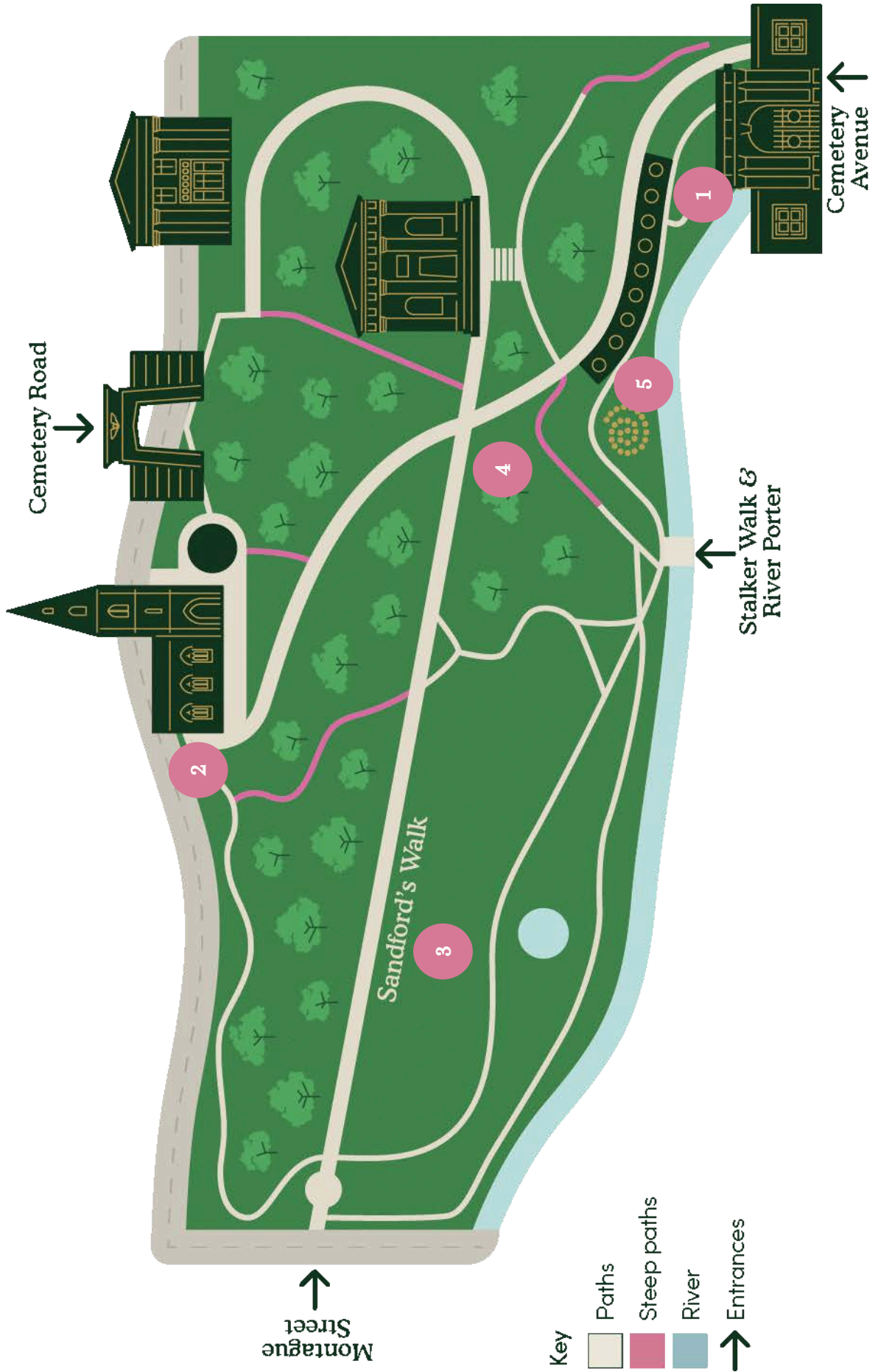
Examples of native bluebell, wild garlic and dog's mercury found in the Cemetery suggest the area was woodland before it became agricultural fields and later a Cemetery.

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# Map of Sheffield General Cemetery



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# Stop 1 on the map: The Gatehouse - plastic pollution

## What is plastic pollution?

There are many different types of plastics but most are strong, light and last a long time. They don't get damaged by water and some types of plastic can resist heat, chemical damage and electricity. They do not biodegrade. This means they won't break down naturally and unless we tidy them up, they will be around forever. 79% of plastic that has ever been made is still in landfills or the natural environment.

## What are the effects of plastic pollution?

Plastic pollution is very harmful to wildlife, both on land and in the ocean. Wildlife can get trapped in it and even eat it. Plastic pollution can disrupt habitats, making it difficult for some species to live and breed.

## What can we do about plastic pollution?

- We can recycle as much plastic as we can.
- We can do litter picks to remove plastic from the natural environment.
- Try not to buy single-use plastic and buy reusable items.



## Stop 2 on the map: The Anglican Chapel - noise pollution

### What is noise pollution?

Cemetery Road near the Anglican Chapel is quite busy. The sound of cars going past and perhaps honking their horn can be quite loud. This is a type of noise pollution. Noise pollution is any unwanted sound that affects the health and wellbeing of humans and other organisms.

### What are the effects of noise pollution?

Sound is measured in decibels (dB). There are many sounds in the environment, from rustling leaves (20-30 dB) to a thunderclap (120 dB) to the wail of a siren (120-140 dB). Sounds that reach 85 decibels or higher can harm a person's ears. Noise pollution can also affect wildlife by making it hard for them to navigate, find food and avoid predators.

### What can we do about noise pollution?

- We can reduce noise pollution by turning off appliances when we are not using them and looking after vehicles and machines to control the level of noise they create.
- We can also plant more trees to absorb noise. According to studies, trees can reduce noise by 5 to 10 decibels around them.



Cemetery Road

Image: Creative Commons



## Stop 3 on the map: Green Space - light pollution

### What is light pollution?

When you stand in this green space at night, you should be able to see the dark sky. You should be able to see the stars and our galaxy, the Milkyway. Light pollution is when artificial light shines where it is not wanted or needed. There are broadly three types of light pollution:

- **Skyglow** – the pink or orange glow we see for miles around towns and cities. It spreads deep into the countryside.
- **Glare** – the uncomfortable brightness of a light source like car headlights at night.
- **Light intrusion** – light spilling into homes, sometimes shining through windows and curtains. This could be from road lighting, street lights or lights from supermarkets.

### What are the effects of light pollution?

Light pollution can have a significant impact on wildlife as it interrupts natural rhythms including migration, reproduction and feeding patterns. It can also affect how humans sleep and can cause headaches.

### What can we do about light pollution?

- Turn off lights we don't use.
- Think about installing low light that doesn't affect wildlife.



Sheffield General Cemetery

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## Stop 4 on the map: Story Circle - fertilisers and pesticides

### What are fertilisers and pesticides?

Humans often create spaces of leisure such as parks or gardens. Sometimes chemicals can be used to manage the vegetation that is unwanted in these spaces. These chemicals can be fertilisers and pesticides. We must remember that parks and gardens are not just for human use, there are thousands of different insects, mammals and birds that use our green spaces.

### What are the effects of fertilisers and pesticides?

If we use fertilisers and pesticides, we could be clearing away potential habitats or damaging potential food sources for wildlife.

### What can we do about fertilisers and pesticides?

- Not use them and choose natural management of our gardens.
- Think about how to support wildlife. When plants die or you want to cut back a tree or bush, you can create a **Hibernaculum**. Hibernacula are shelters that animals can use during the winter to protect themselves from the cold. You can make a hibernaculum using sticks, soil, dead plants, packing them together to make a warm shelter for insects, amphibians and reptiles like frogs, and toads to use.



Hibernaculum or habitat heap!

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 Sheffield City Council

 Sheffield General Cemetery Trust



## Stop 5 on the map: Stone Circle - air pollution

### What is air pollution?

In the Cemetery, there are a lot of trees. Trees are critical in protecting us from air pollution. Air pollution is when there are substances in the air that can have harmful or poisonous effects for people, wildlife and the environment.

### What are the effects of air pollution?

In busy places, like the city of Sheffield there can be lots of harmful pollutants such as carbon dioxide, nitrogen dioxide and sulphur dioxide which can all come from cars. Trees can efficiently remove harmful pollutants while at the same time providing us with clean oxygen.

### What can we do about air pollution?

- Plant more trees.
- Don't remove trees unless they need to be.
- Use public transport to reduce pollutants.

**Did you know?** Sheffield has over 100,000 trees in parks and open spaces meaning we are the most wooded and treed city in Britain (10.4% woodland by area). There are 80 ancient woodlands and 180 woods in total, with Ecclesall Woods being the largest ancient semi-natural woodland in South Yorkshire.



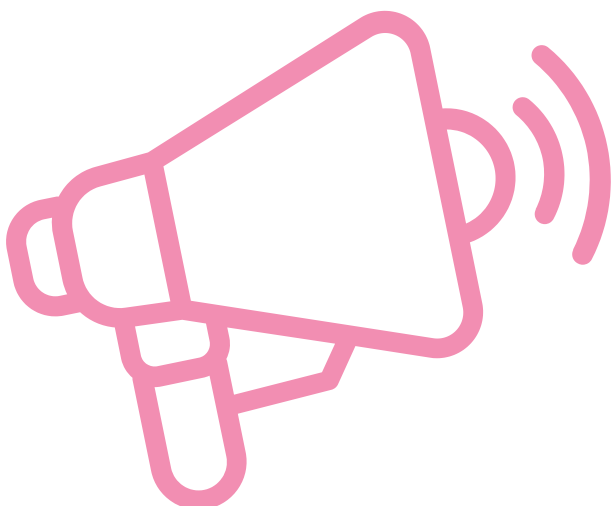
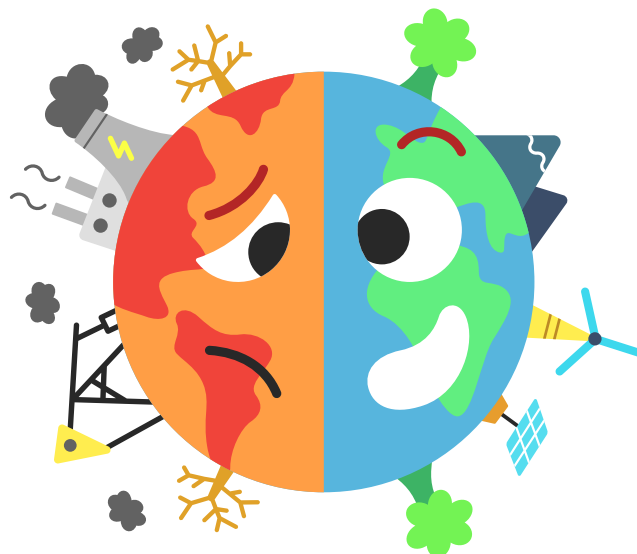
Ecclesall Woods, Sheffield

Image: Creative Commons

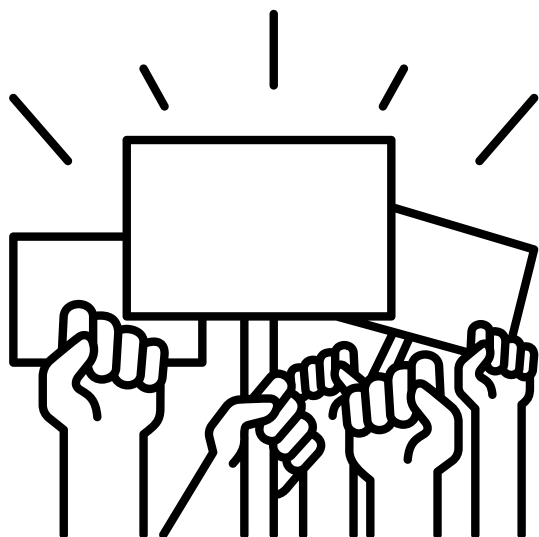
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Explore the young climate activists demanding action and inspiring hope - [Unicef.org](https://www.unicef.org)



# POSITIVE ACTION







**Greta Thunberg**



**Sir David Attenborough**



**Vanessa Nakate**



**Wangari Maathai**

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