



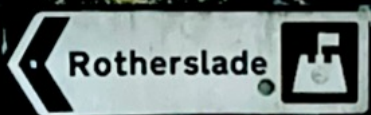
Sustainability in the Early Years



Sustainability in the Early Years

Rotherslade is a small stretch of land at the eastern end of Langland Bay in the South Gower peninsula. Previously known as 'Little Langland', it only exists as a separate beach at high tide.

Clyne Gardens is a specialist botanical park of historical interest, located to the West of Swansea between the city centre and Mumbles. A woodland and bog garden, well-run by the City Council. Clyne Gardens contains varied National Collections of plants set in a beautiful park-land, with features such as a Japanese bridge, Admiral's Tower and the magnificent Clyne Castle. I decided to pick two contrasting locations within these both coastal and woodland walks as I enjoy both. I thought it would be interesting to compare the two natural areas of sustainability within the two locations.



HISTORY OF ROTHERSLADE

In 1926-7 Swansea Corporation carried out extensive improvements to the access to RotherSlade Bay. A huge retaining wall was constructed against the cliff, there were new steps down to the beach, refreshment rooms, shops and an upper promenade where visitors could sit in deck chairs and admire the view. It was to be the entrance to RotherSlade Bay for 70 years.



HISTORY OF CLYNE GARDENS

Ornamental planting at Clyne was begun by the Vivian family. Over a period of some 90 years from the 1860's, the family lavished time and money on Clyne to reflect their wealth, transforming it from an ordinary country estate into an outstanding private woodland garden. The oak woodland is a remnant of Clyne Forest, an important 11th Century Norman landmark.



ROTHERSLADE

WORMS HEAD

LIGHTHOUSE
THE DARK SIDE

GADGWCH OL
TRAED YN UNIC
LEAVE ONLY
FOOTPRINTS



EXPLORE

HEY YOU

PICK UP YOUR
DOG POO



GORSE



RED ADMIRAL

Red Admirals are known for their ability to fly over water and are common in various habitats, including coastal areas. You might see them nectaring on wildflowers, basking in the sun or even overwintering in sheltered spots like sheds or log piles.



Plants need nitrogen to live, and gorse is one of several shrubs that help fix nitrogen in the soil. Nitrogen is one of the nutrients that plants need in the highest quantities. Gorse can play an essential role in creating nutrient-rich soil for other plants. Gorse is called a 'pioneer plant' for this reason, as it helps prepare the soil for plants that come afterwards, including trees. The prolific growth of gorse means that it produces a lot of seeds. These seeds are favoured by some birds, small mammals and insects for food.

Pollinators are crucial for plant reproduction and are responsible for moving pollen from the male part of a flower (stamen) to the female part (stigma). This process, called pollination, is essential for plants to produce fruits and seeds.

Pollinators play a vital role in the production of many of the fruits, vegetables and nuts we eat. They support plant and animal diversity by enabling plant reproduction and providing food and habitat for other species. Pollinators contribute to the overall health and stability of ecosystems.

POLLINATORS

Over a third of our crops globally depend on pollinators such as bees to form seeds and grow. Yet many of the 20,000 species of bees around the world are in decline due to pesticides, habitat loss and climate change.

This widespread problem of water pollution is detrimental.

IMPACT OF CLIMATE CHANGE

CLIMATE CHANGE CRISIS

Climate change refers to long-term shifts in temperatures and weather patterns. Such shifts can be natural, due to changes in the sun's activity or large volcanic eruptions. But since the 1800's, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas.

Overheating

Food Insecurity

Respiratory Conditions

Injury and physical harm

Mental health

Infectious disease

Air Pollution

OCEAN

Approximately 11 million tonnes of plastic enters the ocean every year

Suffocation, as their waste driver of human activities and health. Certain forms of single-use plastic pollution is essential because plastic pollution

and entanglement mistake indigestible stomachs become pollutants and harm biodiversity loss and food security and affects food production. Disarded improperly, plastic waste for food and die of starvation. The most visible impacts of plastic debris are the ingestion, whales, fish and the environment, becoming a widespread ecosystem degradation. It threatens climate safety, burdens economic plastic pollution. Such bans on plastic, a global plastics treaty is a main driver of biodiversity loss.

Water pollution occurs when harmful substances - often chemicals or microorganisms contaminate a stream, river, lake, ocean, or other body of water, degrading water quality and rendering it toxic to humans or the environment. This widespread problem of water pollution is detrimental.



CLYNE GARDENS

BLUEBELLS



Bluebells have been used for a variety of different things throughout history, not just for ornamental purposes. Their sticky sap was once used to bind the pages of books and glue the feathers onto arrows. During the Elizabethan period, their bulbs were crushed to make starch for the ruffs of collars and sleeves. Due to their toxicity, there has been little use for bluebells in medicine. However, their bulbs have diuretic and diaphoretic properties.

Today, around 11% of drugs considered 'essential' by the World Health Organization originated in flowering plants. However, climate change and habitat loss are pushing many plants closer to extinction.

Forget-me-nots do have some medicinal properties though they should be approached with caution due to potential toxicity. Traditionally, they were used for external applications like poultices for wounds and as a lotion for eye problems. They contain compounds that have shown antioxidant, anti-inflammatory, and antimicrobial properties, useful for skin and respiratory issues.

FORGET-ME-NOTS

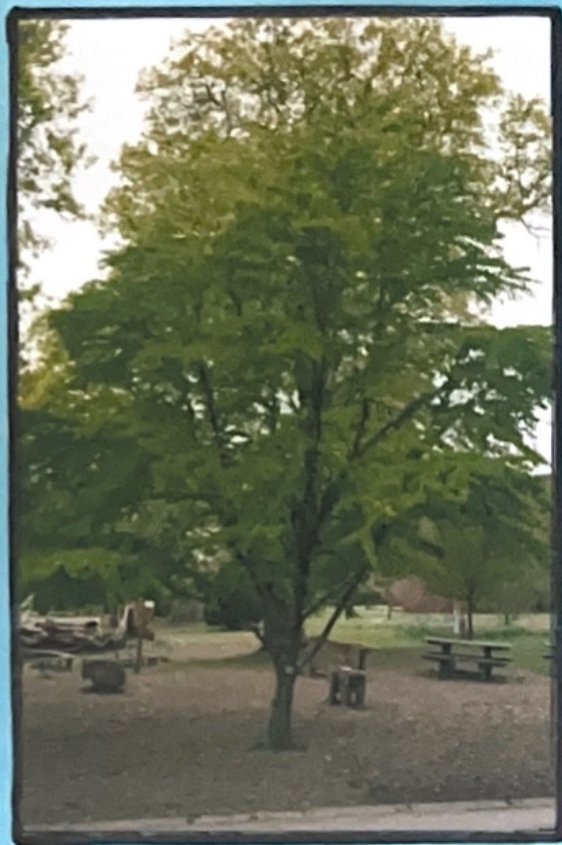
Forget-me-nots are particularly attractive to a variety of insects, especially pollinators like bees, butterflies and hoverflies. The plant's nectar and pollen, easily accessible from its petals, make it a favourite for these insects. The plant's foliage also provides shelter and habitat for spiders and beetles.



BIRDS

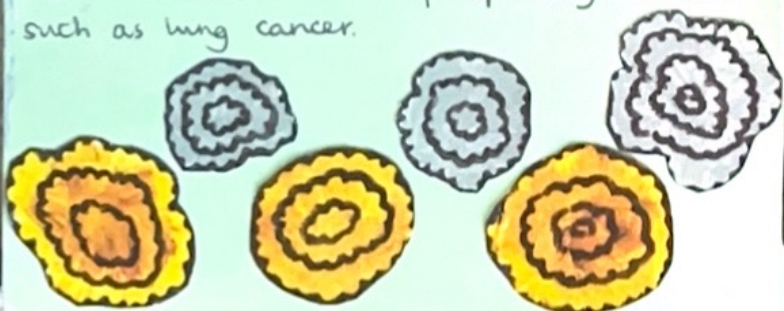
Common birds like House Sparrows, Duncocks, collared Doves, Starlings, wood pigeons, Blackbirds, Robins and Magpies are frequently seen in Clyne Gardens. Specific birds reported in Clyne Gardens include Stock Doves, and common wood pigeons. Wrens, Nuthatches and woodpeckers are also found in the areas varied woodland habitats.

House Sparrows are primarily found in areas such as towns, cities, parks, gardens and even farmland. They are opportunistic birds and will readily take advantage of food scraps and spilled grain. They also prefer nesting in or near buildings, utilising holes, crevices and even ivy-covered walls.



AIR POLLUTION

Lichens reveal polluted air. This signpost does more than just show you where to go. The lichen growing on it tell you that it's from an area with clean air. In most cities you're more likely to see bright yellow Xanthoria lichens, which thrive in polluted air. Burning fossil fuels has caused climate change and made air pollution a global problem, impacting the health of humans and the environment. Many types of lichen struggle to grow in areas with significant air pollution, studies have shown that in areas with fewer lichens, there are more incidents of respiratory diseases such as lung cancer.

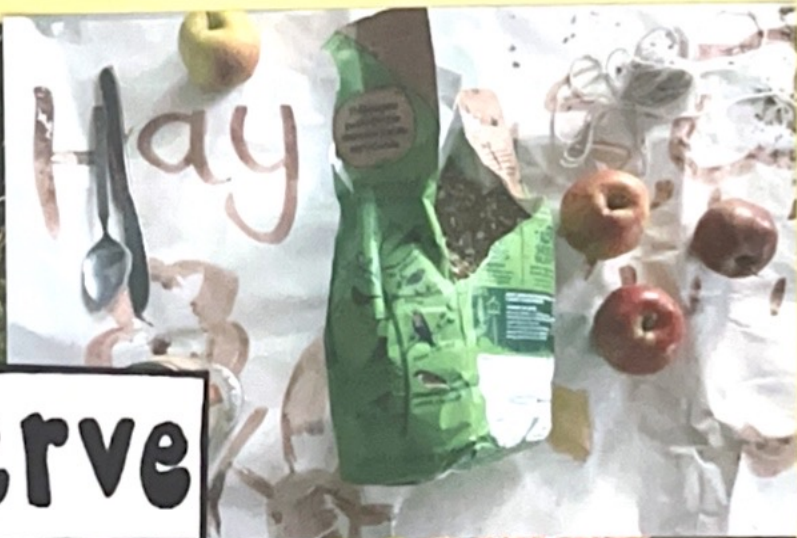


SINGLE-USE PLASTIC



A BALLOON TANGLED IN THE TREES IN LONDON

Single-use plastics, such as straws, bags, bottles and packaging, are designed to be used once and then discarded, leading to significant environmental harm. These plastics often end up in landfills, oceans, and other natural habitats, where they can take hundreds of years to break down. As they degrade, they release toxic chemicals and break into microplastics that contaminate soil and water, harming wildlife and entering the food chain. Marine animals in particular are at risk of ingesting or becoming entangled in plastic waste, which can lead to injury or death. The widespread use of single-use plastics contributes heavily to pollution and underscores the urgent need for sustainable alternatives and better waste management practices. Pictured is a recent photo I took on my trip to London, demonstrating what may have been from a celebration, to now being a hazard.



Conserve





BEACH LITTER PICK



For the conservation part of my John Muir Award, I participated in multiple conservation efforts to support both of my chosen areas. I decided to make bird feeders for Clyne Gardens to support the birdlife. I did this by using apples covered in peanut butter and bird seeds and tying string through them so that they could hang from the trees. Birds can eat peanut butter, especially when it's formulated for them and has no added salt and sugar. It's a good source of fat and protein, making it a valuable food source, especially in winter. For Rotherstade, I decided to do a litter pick on the beach. Unfortunately there was a large amount of waste left on the beach, which if left would bring harm to local wildlife and nature. In preparation, my boyfriend brought his litter picker and we both filled a black bag before we left the beach.

SHARE



I have shared my John Muir conservation efforts with both friends and loved ones, as well as documenting it for lecturers to see. Ideally I would've loved to have been on placement to share my efforts with children.

JOHN MUIR

John Muir was a Scottish-American naturalist, writer and conservationist who played a pivotal role in the early American environmental movement. Often referred to as the "Father of the National Parks," Muir was instrumental in preserving wilderness areas in the United States, including Yosemite. He co-founded the Sierra Club in 1892. His deep love for nature expressed through influential writings, helped shape the American Conservation movement and inspired the creation of several national parks. Muir believed in protecting nature for its own sake and left a lasting legacy in environmental preservation.

Muir was important as a conservationist because he helped spark the modern environmental movement and influenced the way people value and protect nature. He believed that wild places held spiritual and intrinsic value - not just economic use, and should be preserved for everyone, including future generations. His passionate writings and advocacy helped convince leaders, including President Theodore Roosevelt to protect millions of acres of wilderness. Muir's work laid the foundation for the US National Park system and changed how Americans think about nature and conservation.

Jane Goodall is a British primatologist and conservationist known for her pioneering research on wild chimpanzees in Tanzania. Her work revealed that chimpanzees use tools and have complex social behaviours, reshaping our understanding of animals, beyond science, she has been a global advocate for conservation and animal welfare, founding the Jane Goodall Institute to support environmental and community based efforts worldwide.