THE LEEDS RECYCLING AND ENERGY RECOVERY FACILITY FACT FILE 1:

Ecosystems

The Leeds Recycling & Energy Recovery Facility (RERF) formally opened in 2016 as a high quality, innovative building, located on the site of the former Cross Green wholesale market in east Leeds. Standing at 42 metres high and 150 metres long, this award-winning, landmark building is highly visible in the city and incorporates a visitor centre providing local schools with an education resource to support learning about waste, recycling, energy and the environment.

Schools have a key role in contributing to Leeds' ambition to be a 'zero waste' city as waste from UK primary and secondary schools totals around a quarter of a million tonnes each year, equivalent to 185 double decker buses every school day!

Plants and animals that live in a particular location or habitat can be referred to as an ecosystem.

An ecosystem might be small-scale and cover just a small area (such as a pond or rock pool) or it could be large-scale covering a much bigger area (such as a tropical rainforest). Plants and animals within an ecosystem depend on each other for their survival and, in a delicate balance, these lifeforms help to sustain one another. Disruptions to an ecosystem can potentially have disastrous effects on all organisms within the ecosystem.

To fully appreciate the importance of an ecosystem think about what happens when a new plant or animal is introduced into an ecosystem where it did not previously exist.

Any new organism competes with the natural organisms from that location for any available resources. These unnatural strangers can sometimes push out other organisms causing them to become extinct. This can also affect still more organisms that might previously have depended on the newly extinct organism as their food source.

working in partnership

Leeds City Council VEOLIA

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Did you know

We have one of the largest green living walls in Europe. With over **111,000** native plants and an area covering **1,800m²**.

Here at the Leeds RERF you may have seen one of the most distinctive design features which is the living/green wall that is believed to be the largest in Europe. It is made up of more than **111,000 native plants, shrubs, grasses and bulbs including:**


Marsh Daisy


Wall Bellflower


Hart's Tongue Fern

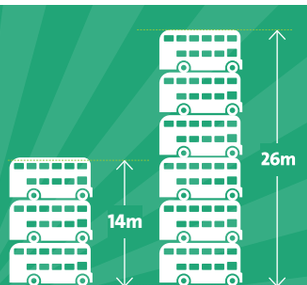

Butterfly Bush


Japanese Barberry


Common Hazel

The living/green wall is designed to be self-sustaining through capturing **rainwater that is then used to feed the plants in the wall with nutrients.**

The living wall is a south facing installation which, through 'catching the sun', benefits from passive **solar gain that helps to keep the building warm in winter and cool in summer.**



Designed by Biotecture, a British company specialising in living/green walls, **the wall stands at 120m wide and ranges from 14m at its lowest to 26m at its highest point.**

That's the height of 6 double decker buses stacked

The living/green wall houses a number of insect habitat boxes that **support insect life such as bees and ladybirds as well as acting as a feeding station for bats** that are attracted to the wall by the insects.

Did you know

We produce enough electricity from our energy recovery process to power **22,000** homes via the National Grid.

Through its use of living/green wall technology the Leeds RERF makes a direct and significant contribution to Leeds' green corridors by creating a range of valuable habitats for different species. At Leeds RERF green corridors support the movement of wildlife through connecting the north-eastern corner of the site to the green space to the north. Covering an extensive area of 1,800m², the living/green wall also has a role in contributing to improving air quality as plants in cities have been shown to remove nitrogen dioxide (NO_2) and particulate matter primarily created by transport emissions.

Curriculum links

- National Curriculum **Science (Biology)**
- National Curriculum **Geography**
- National Curriculum **Citizenship**
- **PSHE Education** Programme of Study (non-statutory)

Brain Teaser: Considering the Leeds RERF's living/green wall, explain its role in supporting ecosystems and give an example of an ecosystem, listing some of its member organisms.