THE LEEDS RECYCLING AND ENERGY RECOVERY FACILITY FACT FILE 2:

Sustainable Design

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!

SUSTAINABLE DESIGN
Takes into account how our decisions might affect the environment considering:

WHETHER PRODUCTS CAN BE MADE TO BE EASILY REPAIRED AND DESIGNED TO BE EASY TO TAKE APART AT THE END OF THEIR USEFUL LIFE TO RE-USE THEIR COMPONENT PARTS OR RECYCLED INTO SOMETHING ELSE – A PROCESS INCREASINGLY REFERRED TO AS THE CIRCULAR ECONOMY (SEE FACT FILE 5 THE CIRCULAR ECONOMY)

CAN MATERIALS HARMFUL TO THE ENVIRONMENT BE AVOIDED

WHETHER A PRODUCT IS NECESSARY IN THE FIRST PLACE

HOW MATERIALS CAN BE USED MOST SPARINGLY

working in partnership

Leeds CITY COUNCIL VEOLIA

SUSTAINABLE DESIGN IS IMPORTANT BECAUSE, BY THINKING ABOUT HOW OUR DECISIONS AFFECT OUR ENVIRONMENT, WE CAN TRY TO REDUCE ANY NEGATIVE IMPACTS WHICH CAN HAVE POSITIVE HEALTH BENEFITS FOR HUMANS AND OTHER LIFE FORMS.

Here at the Leeds RERF, one of the most distinctive features is the impressive **42 metre high arched timber frame believed to be the largest timber archway in Europe.** Add another 33 metres and you reach the top of the stack that stands at a mighty 75 metres high! **The timber used in the archway is a natural and renewable building material.**

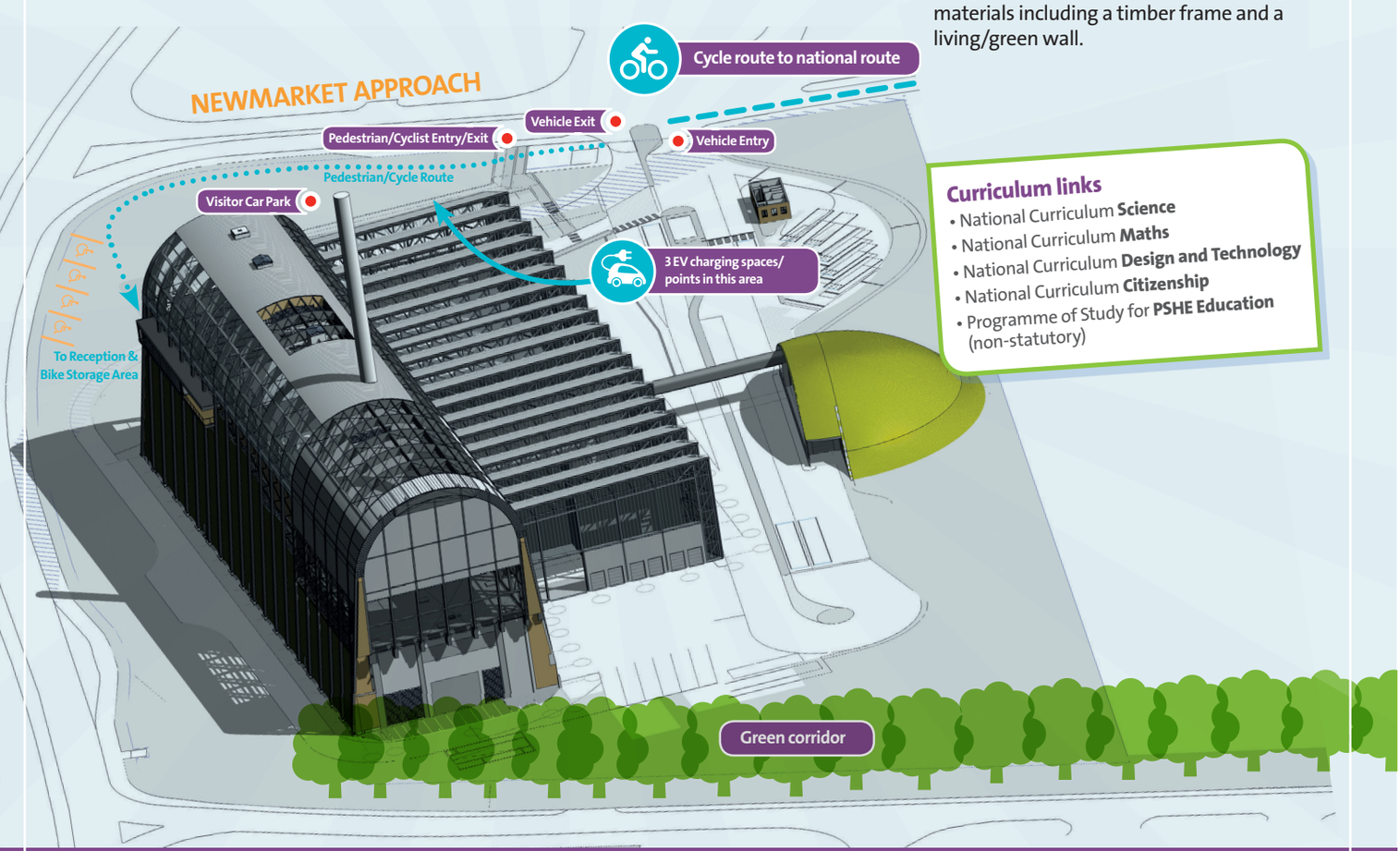
Architect, Jean Robert Mazaud of S'pace Architects, is reported to have been partly inspired, in the iconic design of the RERF, by the shape of First World War airship hangers.

The RERF's living wall collects rainwater using a system that reuses water through **collecting rain as it falls and moving it through an extensive irrigation system watering all the plants in the green wall.** The living wall helps to maintain biodiversity in the local area with more than **111,000 native plants** and a number of insect habitat boxes.

The RERF car park has a number of electric car charging points for staff and visitors to use as well as cycle storage provided to encourage sustainable travel for both staff and visitors. A new footpath and cycle route along the main road links National Cycle Network Route 66 with the East Leeds Link Road.

The process of combustion at the RERF produces a by-product of bottom ash from which metals are recovered on site. This is stored before being taken off-site for further processing and to be recycled into an aggregate for use in the construction industry.

The Leeds RERF makes a direct and significant contribution to sustainable design in its selection and use of building materials including a timber frame and a living/green wall.



Curriculum links

- National Curriculum **Science**
- National Curriculum **Maths**
- National Curriculum **Design and Technology**
- National Curriculum **Citizenship**
- Programme of Study for **PSHE Education** (non-statutory)

Brain Teaser: Explain with examples what is meant by sustainable design?