

Recycling & Energy Recovery Facility

Pontefract Lane, Leeds

Project Case Study

Client: Veolia

Installed: 2016



This 1,800m² living wall in Leeds is the largest in Europe. It is a vertical forest that incorporates over 100,000 plants including larger shrubs, small trees and over 700 habitat boxes. At 28 metres tall it is also one of Europe's tallest living walls

Project Details

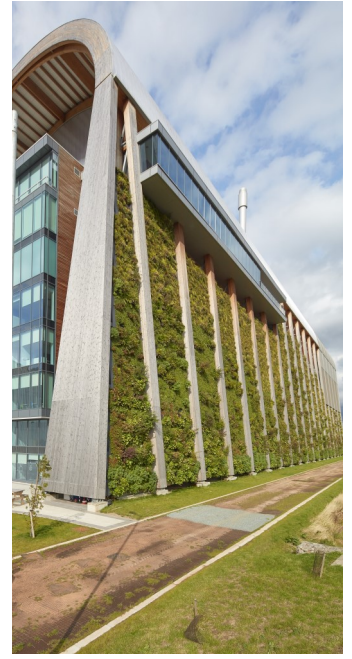
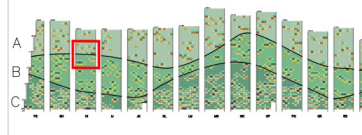
Biotope were engaged on the project four years before the living wall was installed to ensure that the unique design features would be fully integrated with the rest of the building. The Recycling and Energy Recovery Facility was designed by S'PACE (Jean Robert MAZAUD) Architects and built by Veolia on behalf of Leeds City Council.

The overall structure is a landmark building in Yorkshire reaching a height of over 40 metres in total, and Leeds City Council wanted to soften the southern façade and harmonise it with the landscape. The original design by Espace Architects was for a gabion type structure to the living wall with overflowing plants at differing scales from ground cover plants to shrubs and small trees.

Biotope took this idea and developed it to produce an award winning design that worked from an independent structural frame and included over 700 shrub boxes to complement the habitat boxes. Biodiversity was a big driver for Leeds City Council and so we worked closely with the Environmental Officers to develop a planting plan that would be suited to the region and the Leeds Biodiversity Action Plan (BAP).

Highlights

- ◆ Europe's largest and tallest living wall.
- ◆ Winner of Leeds Architecture Awards 2016.
- ◆ Overall planting design based on three provenances mimicking a woodland hillside landscape.
- ◆ A vertical forest that incorporates larger shrubs and small trees to maximise biodiversity.
- ◆ Designed to work in 17 bays between timber glulam frames.
- ◆ Single irrigation plantroom with 36 irrigation valves.
- ◆ Fully maintained by Biotope since installation.



Our Approach

We worked with Veolia’s Design Team for the project and were responsible for discharging the Planning Conditions relating to the living wall both with regards to planting species and maintenance requirements and performance targets. To show how the living wall would look we produced detailed photomontages of the proposed planting palette and design. This incorporated requirements from the Leeds BAP.

Over a year before the installation we began procuring the >100,000 plants and grew them on in our nursery. The 1,800m² of living wall consisted of over 6,500 modular panels each of which was pre-grown on our vertical racking system at our nursery in West Sussex.

Throughout the design and build process we coordinated with Clugston, the Main Contractor, to ensure that all the aspects of our Works were designed to suit the overall requirements of the building as well as the living wall. The installation was completed in 20 weeks.

We continue to maintain the living wall for Veolia. The irrigation system is remotely monitored and controlled. To access the wall we are working from some very large cherry pickers.

“This excellent facility is at the heart of our commitment to sustainability and making the best use of our resources.”

- [Lucinda Yeadon](#) | Leeds City Council executive member for Environment and Sustainability

