

LIDL BOTTLING PLANT
FOSTON, DERBYSHIRE, UNITED KINGDOM**Waterproofing of Reservoirs, Lakes and Channels****Problem**

A new water bottling plant was being constructed by supermarket chain Lidl at Dove Valley Park in Foston, Derbyshire. The development of the 540,000sq ft £50 million pound project included the construction of a large attenuation pond in an area of sandy ground. A suitable pond lining solution was sought to allow storage of surface water drainage within the attenuation pond and prevent the water from leaching into the nearby aquifer that was being tapped into to supply the bottling plant.

Solution

Maccaferri proposed the use of its Macline GCL W20 to impermeably line the attenuation pond and this was accepted by contractors AFS Earthmoving Ltd in July 2022.

Maccaferri supplied a total of 2,250m² of Macline GCL W20 to the project site and this was installed by AFS in August 2022.

Macline GCL W20 is a reinforced geosynthetic clay liner specifically designed for use in landfill and pond lining applications. It consists of a layer of natural granular bentonite sandwiched between a woven and non-woven geotextile. When hydrated, the bentonite forms a thin clay layer to maintain very low permeability without the need to import large quantities of puddle clay and therefore offers a much more sustainable solution with a greatly reduced carbon footprint.

Concrete headwalls can easily be accommodated by applying layers of Macline GCL W20 around the headwall and sealing with bentonite granules also provided with the liner.

Macline GCL W20 is self-sealing in the event of a puncture and has excellent slope stability and climatic resistance together with a high chemical resistance making it suitable for use in a wide range of ground conditions.

Client: Lidl Supermarkets**Designer / Consultant:** AFS Earthmoving**Contractor:** AFS Earthmoving**Products used (Qty.)**- Gcl 2250m²**Date of construction:** 07/2022 - 08/2022[Google Maps](#)[Google Earth](#)

Macline GCL being installed with a spreader bar.



Macline GCL placed in drain trench to seal under filter drain.



Bentonite powder is used to seal adjacent roll edges.