

Stormwater
Leachate
Tank

Project Location

Oldham, Lancashire, UK

Project Details:

Land Fill Leachate Cut-Off, Collection and Infiltration
Roundthorn Primary School

Completion

Date

2000

Client

Roundthorn Community Primary
School

Capacity

11,000 Litres

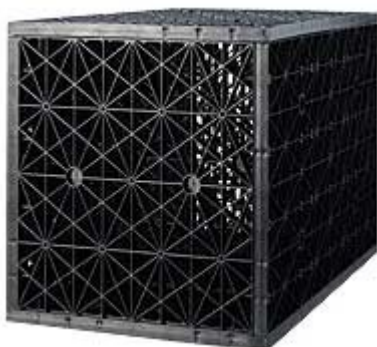
Product / Application Types:

Atlantis Matrix Tank



Challenge:

Roundthorn Primary School constructed in Oldham, Lancashire was close to a former landfill site. Leachate from the site is drained by series of land drains running near the playing field and the school compound. The landfill is at a higher level compared to the school development and there was a potential problem of leachate leakage into the school site and instability of the adjacent slope due to this flow.



Atlantis Solution:

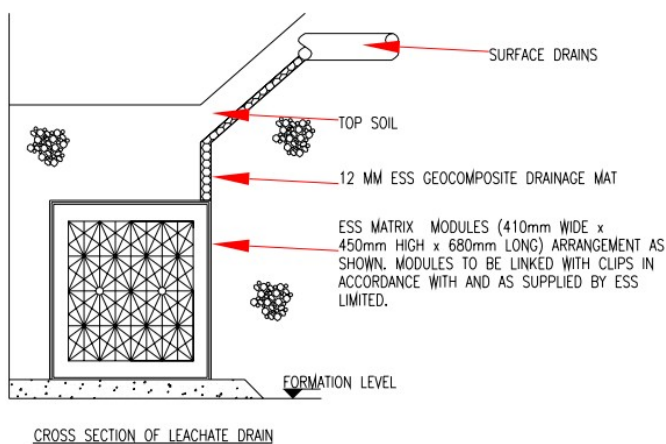
A solution was provided using Atlantis Matrix Tank modules for leachate drainage, collection and infiltration, a membrane for slope stabilisation and geotextile for leachate infiltration and gas ventilation.

Installation:

The existing land drainpipe was connected to the key trench made up of drain to infiltrate leachate through the constructed land slope. Further slope stabilisation mat is connected to the leachate collection system made up of Single Atlantis Matrix Tank modules running along the bottom of the slope joining the soakaway tank formed using Double Atlantis Matrix Tank modules.

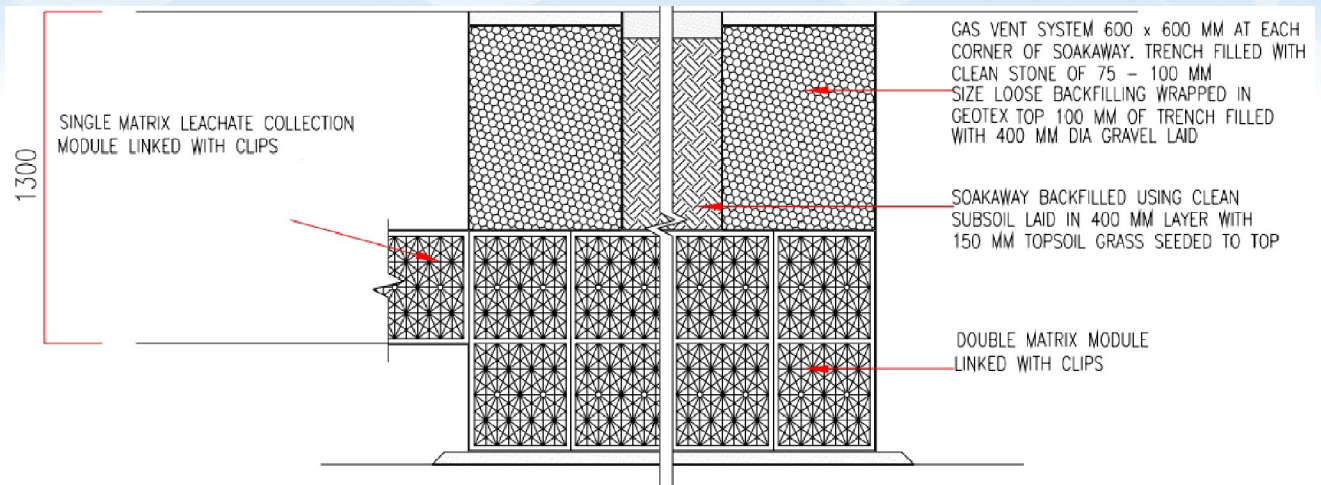
Leachate drain:

The leachate seeping through the constructed land slope is collected in to the Single Atlantis Matrix Tank module having a void ratio of 95 %. The modules were wrapped using a permeable geotextile. The Single Atlantis Matrix Tank module acts as a leachate conveying system emptying into a soakaway.



Infiltration System:

The leachate is collected in a soakaway tank of 11 m³ capacity made up of double Atlantis Matrix Tank modules wrapped with geotextile. The tank also includes a venting system at each corner above the tank made up of 600 x 600 mm Atlantis Matrix Tank capacity modules filled with stone of size 75 mm – 100 mm size (wrapped with geotextile). The top layer above the tank was refilled using clean sub soil.



The system has been successfully functioning from the time of installation (June 2000).

Benefits:

- Innovative, flexible and economical solution.
- Better infiltration.
- Reduced landfill cost for the excavated earth (constituting Special waste).
- Installation time reduced from month to week