

NOTES WITH RESPECT TO GEO-CELLULAR SURFACE WATER ATTENUATION TANKS

All modular geo-cellular surface water drainage attenuation tanks shall be designed by a specialist contractor in accordance with:

- Eurocode 7 (BS EN 1997-1-2004)
- CIRIA report C680

Design shall include checks for:

- Flotation
- Dynamic and cyclic loading
- Creep
- Deformation

As well as the following vertical loads and associated surcharge (both on & adjacent to the tank)

- Surfacing - 500mm (includes 150mm tarmac surface and 350mm stone foundation.)
- Backfill underlying the surfacing, specification to be determined by manufacturer min 1100mm
- Distributed loads 10 kn/m²
- Concentrated loads 50kn (vehicles up to 16,000kg)

Deflection of the surfacing shall be limited to less than 1mm by design.

Installation is to be carried out to manufacturer's specific installation requirements including points listed below:

- Clean, firm level base
- No material stockpiles over unless this has been allowed for by design
- Dewater excavation until design cover against floatation has been placed
- Vents to be installed as required by tank manufacturer

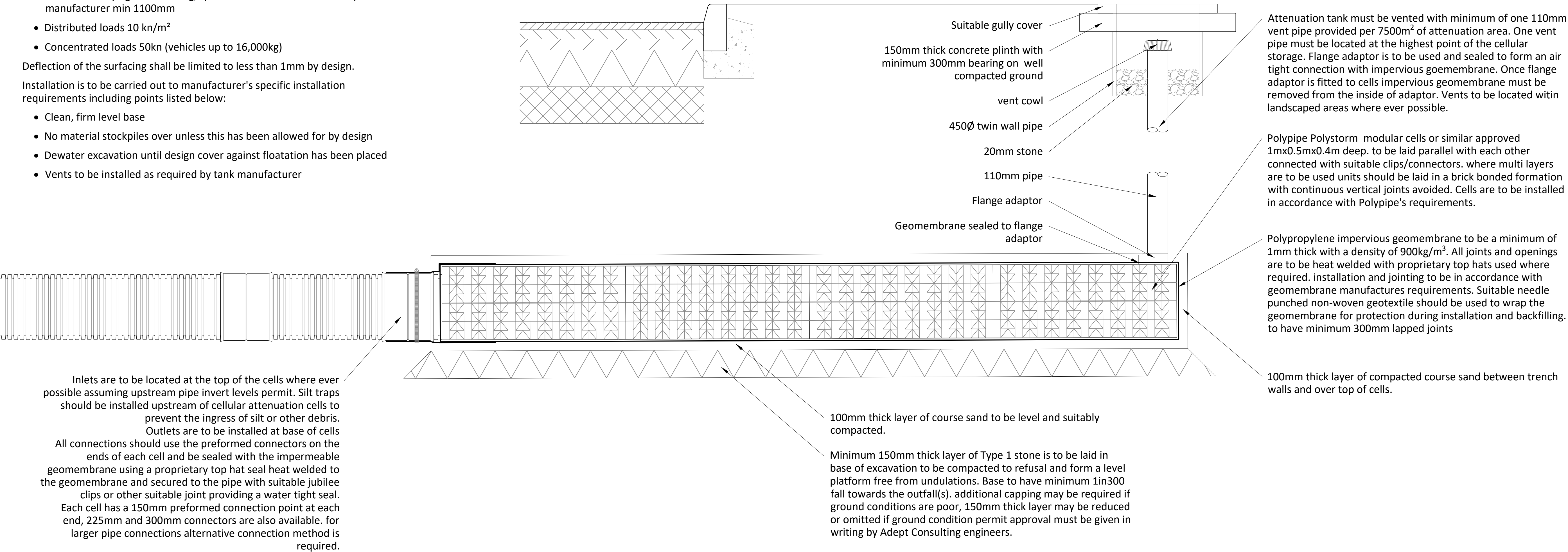
Construction plant such as excavators can impose significant loads on any cellular storage the following guidelines should be followed:

- Care must be taken not to damage the units especially edges of the units
- Where ever possible machines placing back fill material should not load the tank. where this is not possible a minimum of 300mm thick layer of fill should be placed over the units. Only tracked excavators not exceeding 20 tonnes weight should be used.
- Compaction plant used over the units should not exceed 2300kg/metre width compaction should be done in accordance with the Specification for Highway Works.
- All site traffic should be prevented from trafficking the system even once finished unless site specific assessment demonstrates that it is acceptable.
- Under no circumstances are cranes or their outriggers to load the storage units.

Back fill under landscaped areas to be done with selected site won material free from large/sharp objects.

Backfill under trafficked areas is to be selected granular material suitable for compaction with the plant available.

Backfill materials needs to be suitable for end use and capable of being laid above the cells with compaction plant deemed appropriate by the manufacturer.



Typical Detail Cellular Attenuation Tank
(Scale N.T.S.)