

It is the responsibility of the contractor to ensure that the design process at the earliest health & safety aspects are given full consideration. The contractor should ensure that the design process is undertaken to eliminate risk, the way number of the project (over time) to ensure safety and risk.

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1. Manholes, sewers etc. and any other part of the works intended for adoption under a Section 104 Agreement or gullies etc. intended for adoption as Highway Drainage are to be "Sewers for Adoption" 4th Edition and to any requirements of the Adopting Authority and the Local Council.

2. Underside of PV and SW drainage is to be constructed in accordance with the Building Regulations, BS 8301 and relevant Agreement Certificates.

3. All private drainage to be 100mm unless indicated otherwise. All connections from private to adoptable manholes/sewers to be 150mm(Ø/min).

4. Private drainage with less than 0.5m of cover in drives and car surrounds to have minimum 150mm concrete bed and surround.

5. Private Drains are to be constructed using flexibly-jointed pipe (e.g. 110mm or 150mm) or pre-formed polypropylene and BS EN 295 (6.4) (Holloworth Sandstone or similar) or uPVC Building Drainage system pipe work to EN 1401-1, bedded and back-filled in accordance with the manufacturers instructions and the specifications listed in Note 2.

6. Backfilling of drain trenches adjacent to dwellings or other structures to be in accordance with BS 8301-Fig 9.

7. Access, fittings and inspection chambers less than 1m deep are to be clayware or pre-formed polypropylene as appropriate to the depth and number of connections. Chambers greater than 1.2m deep are to be of pre-cast concrete construction with 150mm in-situ concrete surround, or polypropylene reduced accordance with Table 6 of BS 8301.

8. Cover levels indicated on the drawings are nominal and may be subject to change. Inspection chamber covers should be Grade B in areas accessible to wheeled vehicles and Grade C elsewhere.

9. Rainwater down pipes to be connected direct to drain using an approved rainwater pipe. For communal parking areas refer to the detail shown on permit, roofing access.

10. Where drains pass through foundations or other rigid structures they are to be made with 'rocker pipes' for flexibility to be made with 'rocker pipes'.

11. The positions of SVPs, stub-stacks, W.C. outlets etc. and rainwater down pipes are to be accurately located from the 'As-Is' survey drawings.

12. Gullies situated in areas accessible to wheeled vehicles are to be of suitable construction. Typically Hesporth square gully set into concrete. For communal parking areas refer to the detail shown on ID Civils Design drawing number 4643-C-D3-01.

13. Drains within areas of 'make good' to be constructed by first excavating through the fill material into undisturbed ground. The drain trench is then to be back-filled to formation level using suitable granular fill material well-compacted in layers not exceeding 225mm.

14. Drains to be constructed under dwellings with suspended floor slabs should either be installed using a proprietary hanger system where 'beam and pot' or similar construction is used, concrete ground slabs are to be poured in-situ.

15. Finished ground levels have been prepared assuming that the building regulations, i.e. at the front of the property unless otherwise stated.

16. For all details of fences/walls and enclosures refer to architect for details.

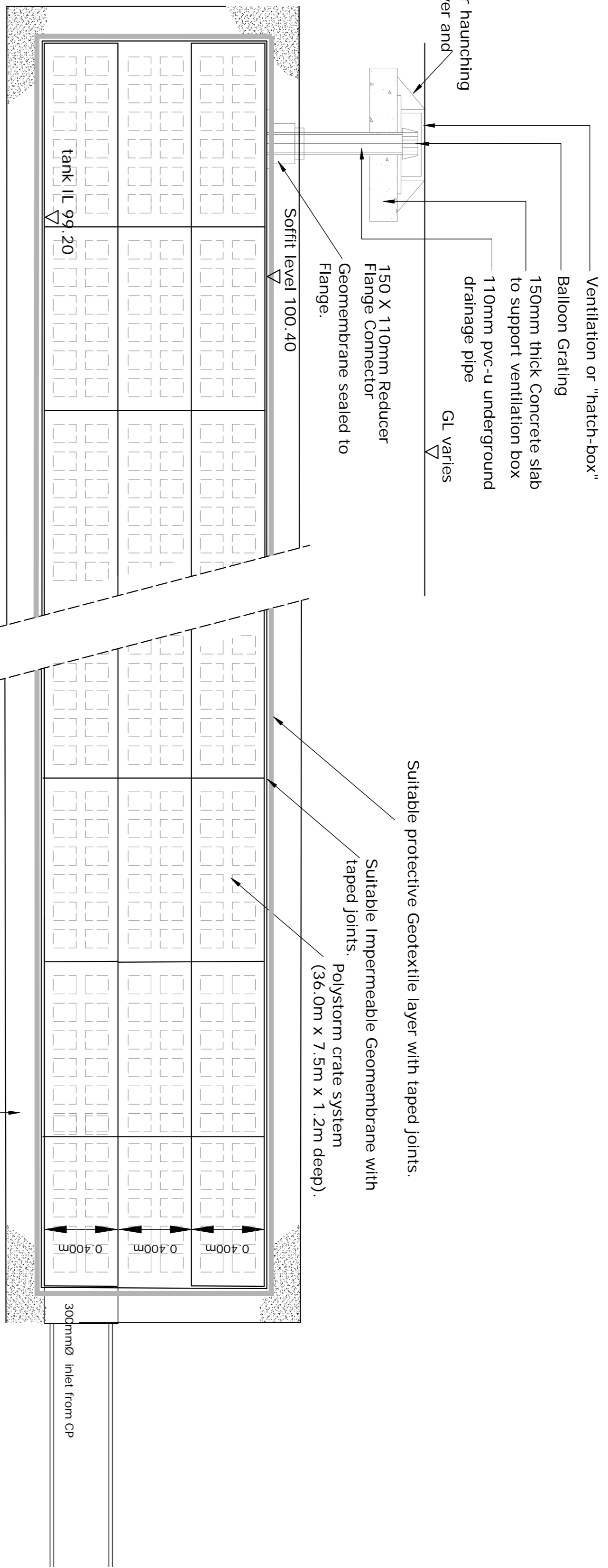
# Polypipe "Polystorm" Storm Water Cell System

## INSTALLATION GUIDE

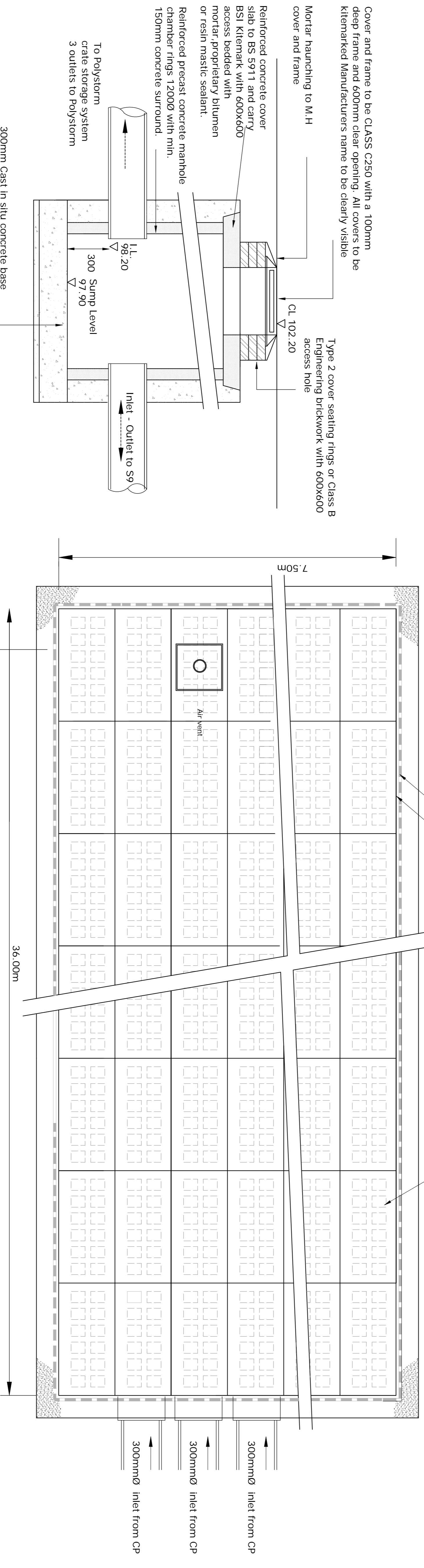
1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than the cell units.
2. Prepare and compact formation. If formation proves inconsistent, then lay a minimum 50mm of blinding concrete.
3. Lay the Geotextile over the base and up the sides of the trench excavation.
4. Lay the Geomembrane on top of the Geotextile over the base and up the sides of the trench. A Geomembrane 1mm thick is recommended with taped joints.
5. Lay the units parallel and aligned with each other and clip together.
6. Wrap the Geomembrane around the structure and seal to manufacturer's recommendations.
7. Place the adaptors into position (inc. vent) and fix.
8. Wrap and overlap the Geotextile covering the entire structure, to protect the Geomembrane.
9. Lay 100mm of coarse sand between the trench walls and cell units and compact.
10. Lay 100mm bed of coarse sand over the geotextile and compact. Backfill with stone free as dug material up to underside of car-park construction.

**IMPORTANT**  
This storage tank must be vented to reduce odours and assist with the displacement of air when the tank is being filled. See detail provided or refer to Manufacturers Guidelines.

**IMPORTANT**  
It is imperative that the installation instructions supplied by the manufacturer are followed meticulously with the units correctly positioned on a level bed to avoid future collapse



## Section through "Polystorm" storm water storage.



## Catch Pit

NTS

## Plan of "Polystorm" storm water storage.

**IMPORTANT**  
Due to the temporary car park location over the Polystorm attenuation tank, the structural rating of the crates should be PSM1 or above.

Project Title:		HILLCREST HOMES	
Project Title:		WHALLEY ROAD, HURST GREEN	
Drawing Title:			
POLYSTORM ATTENUATION TANK			
Scale:		Date	
NTS @ A1		June 2017	
Drawing No	Revision	Status	
4663-C-D4-04	A	Constr.	

**DRAINAGE CONSTRUCTION DETAILS**  
For construction details of all main drainage, refer to United Utilities Standard details STND/19/001 to STND/19/012  
Link: <http://www.unityutilities.com/documents/developer-services-construction-details.pdf>