

1.0 GENERAL

1.1 THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS & SPECIALISTS DRAWINGS & SPECIFICATIONS.

1.2 WORK TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT GOOD PRACTICE, BUILDING REGULATIONS AND SUBSEQUENT AMENDMENTS, THE PROJECT SPECIFICATION, RELEVANT BRITISH STANDARDS AND CODES OF PRACTICE. MATERIALS AND COMPONENTS TO BE SUITABLE FOR THEIR INTENDED USE.

2.0 SOAKAWAY/INFILTRATION SYSTEM

2.1 SYSTEM TO COMPRISE 109.5m² x 0.61m BELOW GROUND STORAGE TANK, TO BE FORMED USING POLYPIPE POLYSTORM 210mm UNITS OVER 400mm UNITS.

3.0 TYPICAL INSTALLATION PROCEDURE

3.1 INSTALLATION PROCEDURES SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE HEALTH AND SAFETY AT WORK ETC. ACT (1974) AND ANY OTHER RELEVANT LEGISLATION. SPECIAL ATTENTION SHOULD BE PAID TO TEMPORARY WORK REQUIREMENTS IN EXCAVATIONS. TYPICAL INSTALLATION PROCEDURE TO BE AS FOLLOWS:

A EXCAVATION AND PREPARATION
EXCAVATE TO THE REQUIRED PLAN DIMENSIONS & LEVEL. CONSIDERATION SHOULD BE GIVEN TO MAINTAINING CONSTRUCTION PLANT ACCESS FOR REINSTATING AROUND THE INSTALLED POLYSTORM UNITS.

ENSURE THAT THE GROUND BEARING CAPACITY AT THE FORMATION LEVEL IS SUFFICIENT FOR THE PROPOSED OPERATIONAL LOADS. THE BASE OF THE EXCAVATION SHOULD BE SMOOTH AND LEVEL, FREE OF LARGE STONES AND SOFT SPOTS. ANY SOFT SPOTS SHOULD BE EXCAVATED AND REPLACED WITH SUITABLE COMPACTED GRANULAR MATERIAL.

PLACE AND COMPACT A 100mm THICK BEDDING LAYER OF EITHER COARSE SAND OR CLASS 6/ SELECTED GRANULAR MATERIAL (WITH 100% PASSING THE 5mm SIEVE), IN ACCORDANCE WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS (MCHW), VOLUME 1, SERIES 600.

B INSTALLATION OF GEOTEXTILE LAYER (PERMEABLE)
INSTALL THE PERMEABLE GEOTEXTILES OVER THE BASE OF THE TANK, FORMING JOINTS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE SHEET OF GEOTEXTILE SHOULD BE LARGE ENOUGH SUCH THAT IT CAN OVERLAP OVER THE EDGE OF THE MODULES BY 200mm. THE GEOTEXTILE SHOULD BE CHOSEN TO SATISFY THE PHYSICAL AND MECHANICAL PROPERTIES INCLUDED ON TABLE 'B', WHILST ALSO ENSURING THAT ANY PROPRIETARY REQUIREMENTS ARE MET.

C POLYSTORM CELL INSTALLATION
PLACE THE POLYSTORM CELLS ON THE GEOTEXTILE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND CONNECT TOGETHER USING POLYPIPE CLIP AND SHEAR CONNECTION AS DETAILED:-

- CLIP CONNECTORS
POLYPIPE CLIPS CONNECT HORIZONTALLY ADJACENT CELLS.
- SHEAR CONNECTORS
VERTICAL CONNECTIONS FOR A MULTIPLE LAYER STRUCTURE ARE FORMED WITH THE POLYPIPE SHEAR CONNECTOR.

ENSURE CELLS ARE ARRANGED SO THAT THEY ARE IN THE CORRECT ALIGNMENT FOR CONNECTION OF THE ADJOINING PIPEWORK (SEE PLAN)

D CONNECTION OF ADJOINING PIPEWORK TO POLYSTORM CELLS
160mm EN 1401-1 PIPES CONNECT DIRECTLY INTO THE CONVENIENT KNOCK-OUT INCORPORATED IN THE END OF EACH CELL. CONNECTION TO 110mm EN 1401-1 PIPES OR OTHER PRODUCTS IS ACCOMMODATED THROUGH THE USE OF STANDARD POLYPIPE ADAPTERS. POLYSTORM CELLS ARE ALSO AVAILABLE WITH EITHER A 225mm OR 300mm FABRICATED RIDGIDRAIN PIPE CONNECTION.

E INSTALLATION OF ENCASED GEOTEXTILE
COMPLETE THE GEOSYNTHETIC ENCAPSULATION OF THE ENTIRE POLYSTORM STRUCTURE, FORMING JOINTS WHERE APPROPRIATE. RE-EXAMINE THE GEOMEMBRANE AND/OR GEOTEXTILE FOR DAMAGE AND JOINT INTEGRITY.

F LATERAL BACKFILLING
BACKFILL AROUND THE SIDES OF THE ENCAPSULATED CELLS, FORMING A 100mm THICK LAYER OF COARSE SAND OR CLASS 6/ SELECTED GRANULAR MATERIAL IMMEDIATELY ADJACENT TO THE CELLS. WHERE REQUIRED, REMAINING EXCAVATED AREAS AROUND THE CELLS SHOULD BE BACKFILLED WITH CLASS 6/ OR 6P SELECTED GRANULAR MATERIAL, IN ACCORDANCE WITH MCHW, VOLUME 1, OR SIMILARLY APPROVED SPECIFICATION.

G COVER BACKFILLING
ABOVE THE WRAPPED POLYSTORM CELLS, PLACE AND LIGHTLY COMPACT A MINIMUM 100mm THICK LAYER OF EITHER COARSE SAND OR CLASS 6/ SELECTED GRANULAR MATERIAL WITH 100% PASSING THE 5mm SIEVE, IN ACCORDANCE WITH MCHW, VOLUME 1, SERIES 600.

FINAL BACKFILLING OF THE INSTALLATION AND SURFACING IS DEPENDENT ON THE EXPECTED OPERATIONAL LOADS AS NOTED BELOW:-

- FIELD CONDITIONS (e.g. LANDSCAPED AREAS)
THE BACKFILL MATERIAL THAT LIES WITHIN 300mm ABOVE THE POLYSTORM CELLS SHOULD BE FREE FROM PARTICLES EXCEEDING 40mm IN DIAMETER, IN ACCORDANCE WITH CLASS 8 MATERIAL TO SERIES 600, VOLUME 1, MCHW. FINAL BACKFILLING UP TO FINISHED GROUND LEVEL MAY BE ACHIEVED USING SELECTED AS-DUG MATERIAL. BACKFILL MATERIAL SHOULD BE PLACED AND COMPACTED IN LAYERS NO GREATER THAN 300mm. COMPLETE LANDSCAPING OVER THE POLYSTORM SYSTEM.

- LIGHTLY TRAFFICKED (e.g. RESTRICTED ACCESS CAR PARK)
BACKFILL WITH CLASS 1 OR 2 MATERIAL IN ACCORDANCE WITH MCHW, VOLUME 1, SERIES 600. BACKFILL MATERIAL SHOULD BE PLACED AND COMPACTED IN LAYERS NOT GREATER THAN 150mm. WHERE THE POLYSTORM CELLS ARE INSTALLED BENEATH A PAVED AREA, THE PAVEMENT SUB-BASE MAY FORM PART OF THE BACKFILL MATERIAL PROVIDED THAT MINIMUM COVER DEPTHS ARE MAINTAINED. COMPLETE PAVEMENT CONSTRUCTION OVER THE POLYSTORM SYSTEM.

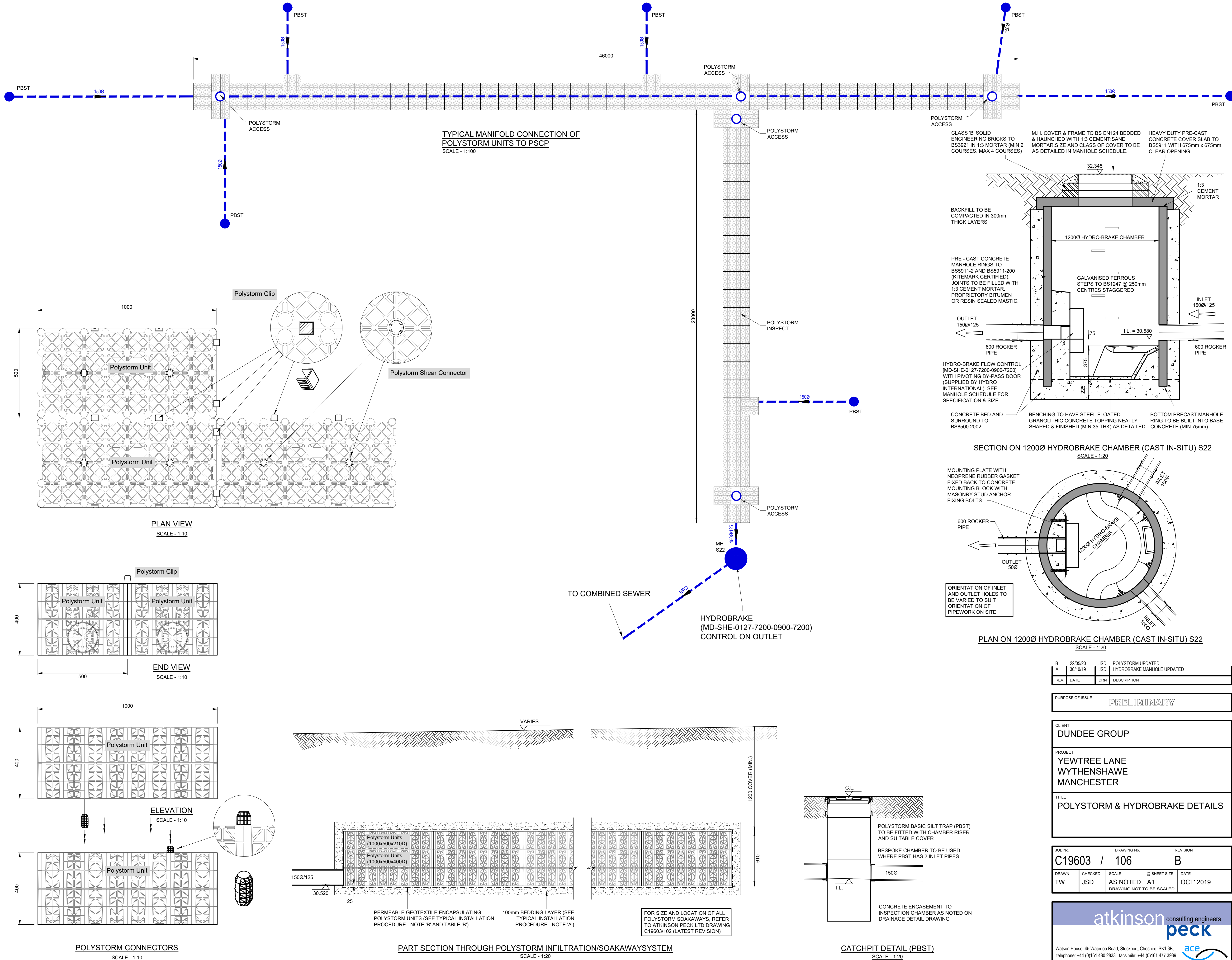
TO ENSURE ADEQUATE PROTECTION TO POLYSTORM SYSTEM MINIMUM COVER OF 600mm AND 500mm TO BE PROVIDED OVER POLYSTORM AND POLYSTORM LITE CELLS RESPECTIVELY. ADDITIONAL PROTECTION TO BE PROVIDED DURING CONSTRUCTION STAGE WORKS AS APPROPRIATE. COMPACTION PLANT OVER AND IMMEDIATELY ADJACENT TO THE POLYSTORM CELLS SHALL NOT EXCEED 2300 Kg/m WIDTH.

H INSPECTION
AFTER INSTALLATION AND PRIOR TO HANDOVER, ANY SILT COLLECTION CHAMBERS OR CONTROL MANHOLES SHOULD BE EXAMINED TO ENSURE THEY ARE FREE FROM DEBRIS OR CONTAMINATION.

3.2 FOR FURTHER INFORMATION REFER TO THE 'POLYSTORM LITE AND POLYSTORM TECHNICAL GUIDE' PRODUCED BY POLYPIPE.

Table 'B' - PERMEABLE GEOTEXTILE REQUIREMENTS

PHYSICAL PROPERTIES		
MATERIAL	TYPICALLY POLYPROPYLENE	
MASS	125 kg/m ²	EN 955
MECHANICAL/HYDRAULIC PROPERTIES		
CBR PUNCTURE RESISTANCE	MIN 1500N	EN ISO 12236
PEAK TENSILE STRENGTH	MIN 8kN/m ²	EN ISO 10319
WATER FLOW RATE NORMAL TO PLANE	MIN 100litre/Sq.m/s @ 50mm HEAD	EN ISO 11058
PORE SIZE 990	TYPICALLY 100µm	EN ISO 12956
pH	RESISTANCE TO ALL NATURALLY OCCURRING ACIDS AND ALKALIS	
CHEMICAL/BIOLOGICAL RESISTANCE	RESISTANCE TO ALL SUBSTANCES FOUND TO NATURALLY OCCUR IN SOILS AND RAINWATER. DETAILED INFORMATION WOULD NEED TO BE PROVIDED TO GEOSYNTHETIC MANUFACTURER IN INSTANCES OF CONTAMINATED LAND.	



B	22/05/20	JSD	POLYSTORM UPDATED
A	30/10/19	JSD	HYDROBRAKE MANHOLE UPDATED
REV	DATE	DRN	DESCRIPTION

PURPOSE OF ISSUE
PRELIMINARY

CLIENT
DUNDEE GROUP

PROJECT
**YEW TREE LANE
WYTHENSHAW
MANCHESTER**

TITLE
POLYSTORM & HYDROBRAKE DETAILS

JOB No.	DRAWING No.	REVISION
C19603	106	B
DRAWN	CHECKED	@ SHEET SIZE
TW	JSD	A1
SCALE	AS NOTED	DATE
		OCT' 2019