

**GROUND CONDITIONS - GLACIAL TILL**

EXISTING SITE AREA = 0.171 Ha  
 EXISTING IMP AREA = 0.000 Ha  
 PROPOSED IMP AREA = 0.057 Ha  
 QBAR BASED UPON 0.171 Ha = 0.73 l/s  
 PROPOSED DISCHARGE RATE = 5 l/s TO NWL COMBINED SEWER

DESIGN BASED UPON CONTAINING 100 YEAR +40% ALLOWANCE FOR CLIMATE CHANGE WITHIN BELOW GROUND SYSTEM.

ALL SIMULATIONS INCLUDE A 10% ALLOWANCE FOR URBAN CREEP.

PRIVATE DRIVEWAYS TO BE CONSTRUCTED FROM PERMEABLE SURFACING.

DRAINAGE TO BE PRIVATELY MAINTAINED.

**MAINTENANCE RECOMMENDATIONS**

**PERMEABLE PAVING:**

MONTHLY: SURFACE TO BE BRUSHED WITH A HARD BRISTLED BRUSH TO ENSURE THAT VOIDS DO NOT SELF-SEAL.

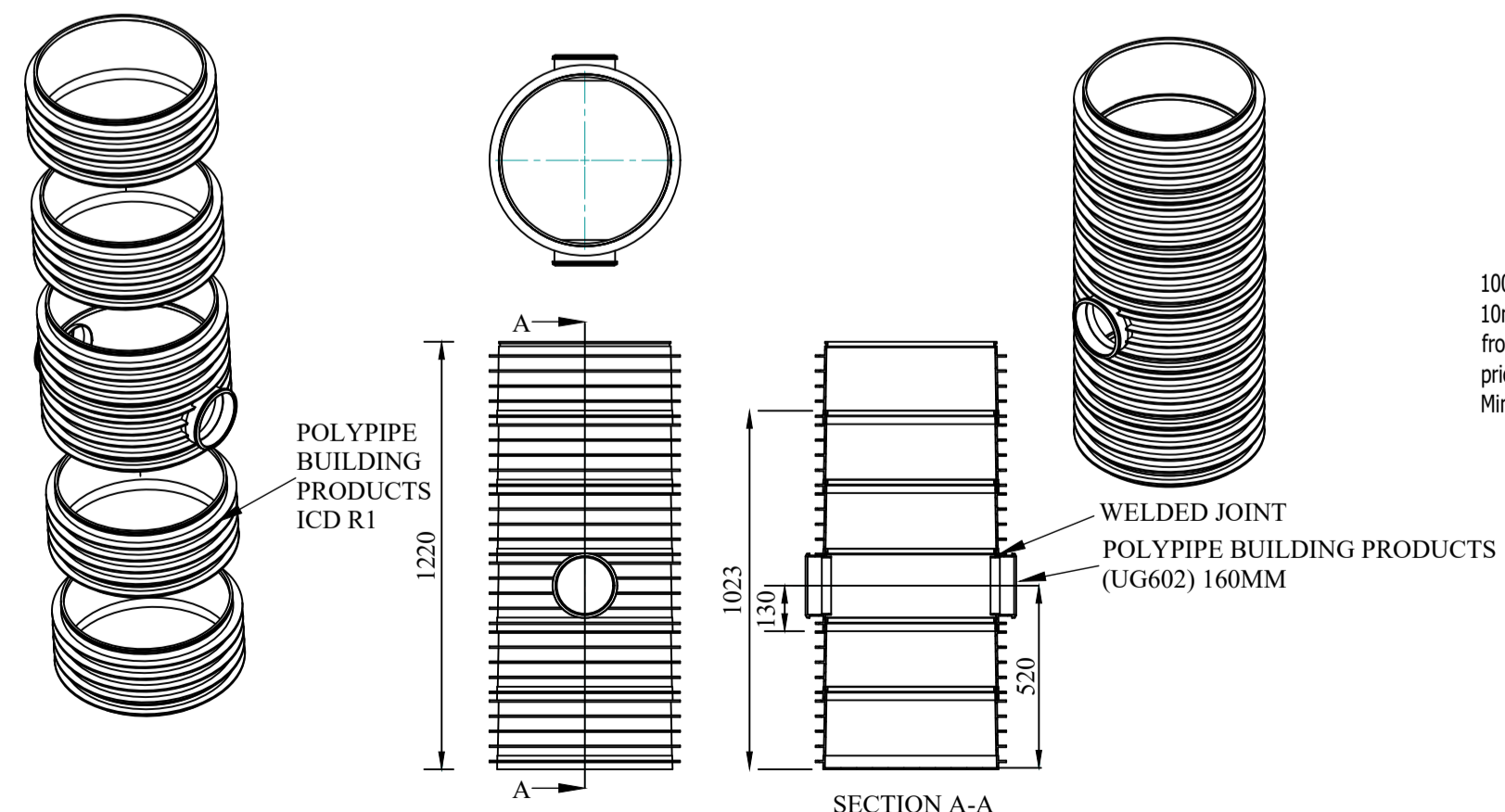
QUARTERLY: SILT TRAPS WILL BE CHECKED FOR SEDIMENT BUILD UP AND EXCESS SILT REMOVED TO ENSURE THE EFFECTIVE PERFORMANCE OF THE DRAINAGE SYSTEM.

ANNUALLY: SURFACE WILL BE JET-WASHED TO ENSURE THAT VOIDS DO NOT SELF-SEAL.

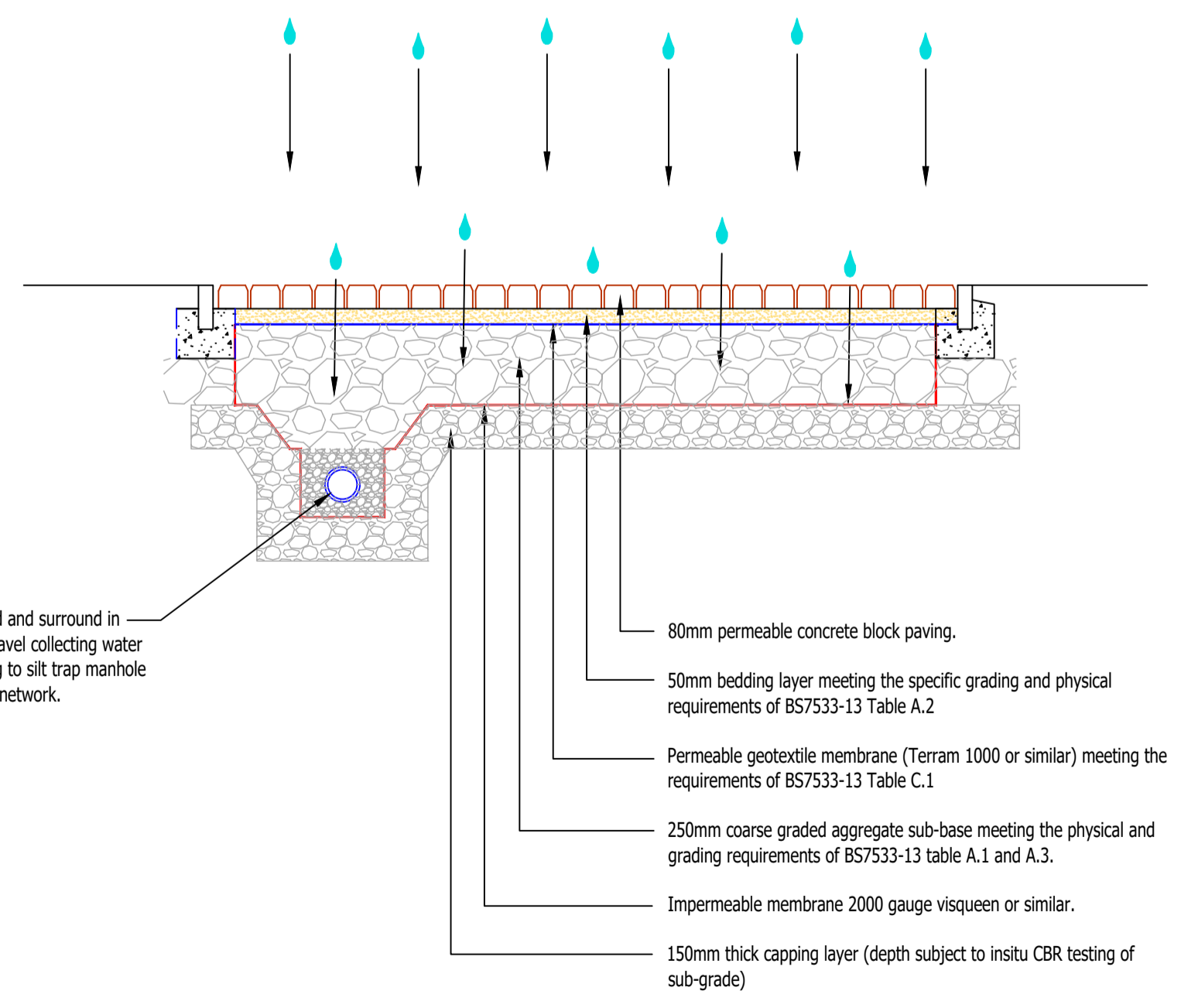
MANHOLES, HYDROBRAKE AND PIPEWORK WILL BE JET-WASHED TO ENSURE THAT THE SYSTEM REMAINS CLEAR OF BLOCKAGE

- Highways**
- All excavations below adopted highways to be backfilled with Type 1 and compacted in layers not exceeding 150mm.
  - Highway Authority to be contacted as soon as Contractor is on site to enable early discussions with the Clerk of Works.
- General Drainage**
- Manhole/inspection chamber covers in trafficked areas to be loading type D400 and B125 in non-trafficked areas.
  - Position and levels of existing manholes and sewers are to be checked on site as soon as possible and preferably before site activities commence.
  - The sewer connection is to be carried out by an NWL Approved Contractor.
  - This drawing is to be read in conjunction with the drainage details drawings.
  - Pipe surround to be granular type 's' unless noted otherwise.
  - Private drainage is to comply with all statutory requirements and accord with BS EN 752 and Building Regulations Approved Document H.
  - Pipe sizes to be 100mm u.n.o.
- Surface Water Drainage**
- Inspection chamber, 475mmØ. Non man entry (>1.2m)
  - Manhole - Concrete Ring
  - Private PVC-U 100mm (unless noted otherwise) drainage pipe.
  - Permeable paving system
- Foul Drainage**
- Shallow inspection chamber, 600mm to invert level, 300mmØ.
  - Inspection chamber, 475mmØ. Non man entry (>1.2m)
  - Private PVC-U 100mm (unless noted otherwise) drainage pipe.
- Combined Drainage**
- Private PVC-U 100mm (unless noted otherwise) drainage pipe.
  - Inspection chamber, 475mmØ. Non man entry (>1.2m)

NOTE: THE BASIC SILT TRAP CONSISTS OF AN INLET / OUTLET PEICE WHICH IS MADE UP OF TWO ICDRI RISERS WELDED TOGETHER WITH TWO AXIALLY ALLIGNED 160 COUPLERS FORMING THE INLET AND OUTLET RESPECTIVLY. THE BASE UNIT IS PRODUCED BY WELDING A POLYPROPYLENE BASE ON TO A ICDRI. THE REMAINDER OF THE CHAMBERS HEIGHT IS CREATED WITH PLAIN ICDRI RISER PEICES PLACED ABOVE OR BELOW THE INLET/OUTLET PEICE.



**BASIC SILT TRAP DETAIL**



**SECTION THROUGH PERMEABLE PAVING PRIVATE DRIVE**  
SCALE 1:20

Greenfield runoff rate estimation for sites	
www.ukusdts.com   Greenfield runoff tool	
<b>Calculated by:</b> richard hall <b>Site name:</b> ST AIDANS ROAD <b>Site location:</b> SOUTH SHIELDS	<b>Site Details</b> Latitude: 55.00174° N Longitude: 1.42614° W Reference: 3668399304 Date: Jan 17 2020 15:28
<b>Runoff estimation approach:</b> IH124 <b>Site characteristics:</b> Total site area (ha): 0.171 <b>Methodology:</b> Q <sub>50</sub> estimation method: Calculate from SPR and SAAR SPR estimation method: Calculate from SOIL type <b>Soil characteristics:</b> SOIL type: 4, 4 HOST class: N/A, N/A SPR/SPRHOS: 0.47, 0.47 <b>Hydrological characteristics:</b> SAAR (mm): 628, 628 Hydrological region: 3, 3 Growth curve factor 1 year: 0.86, 0.86 Growth curve factor 30 years: 1.75, 1.75 Growth curve factor 100 years: 2.08, 2.08 Growth curve factor 200 years: 2.37, 2.37	<b>Notes</b> (1) Is Q <sub>50</sub> < 2.0 l/s/ha? When Q <sub>50</sub> < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha. (2) Are flow rates < 5.0 l/s? Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements. (3) Is SPR/SPRHOS ≤ 0.3? Where groundwater levels are low enough the use of soakways to avoid discharge offsets would normally be preferred for disposal of surface water runoff.
<b>Greenfield runoff rates</b> Q <sub>50</sub> (l/s): 0.73, 0.73 1 in 1 year (l/s): 0.63, 0.63 1 in 30 years (l/s): 1.27, 1.27 1 in 100 year (l/s): 1.51, 1.51 1 in 200 years (l/s): 1.72, 1.72	

Issue	Date	Description	By	Chkd	Appd
P1	17-01-20	Preliminary issue	RH	PL	PL

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Client: **ST AIDAN'S COURT (SOUTH SHIELDS) LTD**

Job Title: **RESIDENTIAL DEVELOPMENT ST AIDANS ROAD SOUTH SHIELDS**

Drawing Title: **DRAINAGE STRATEGY**

Scale at A1: 1:200

Discipline: **Preliminary**

Drawing Status: **Preliminary**

Job No: <b>19123</b>	Drawing No: <b>01</b>	Issue: <b>P1</b>
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