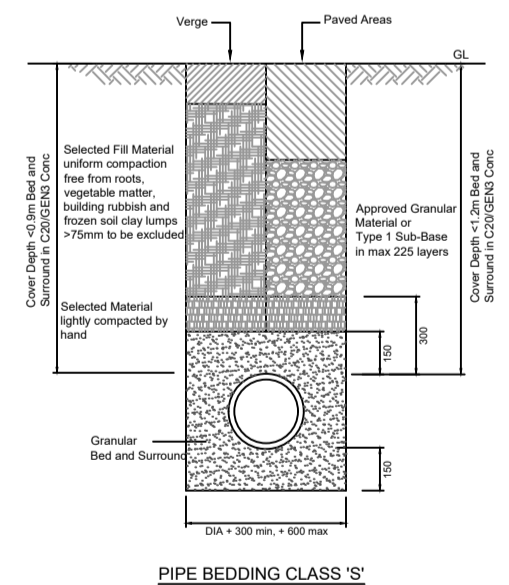
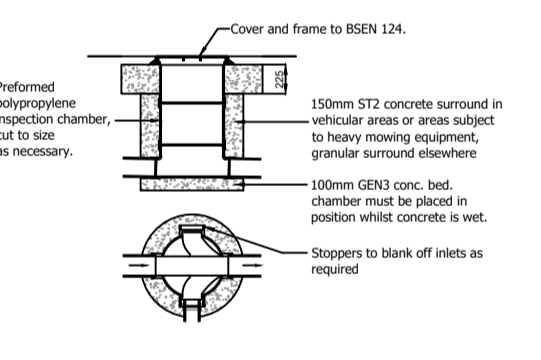
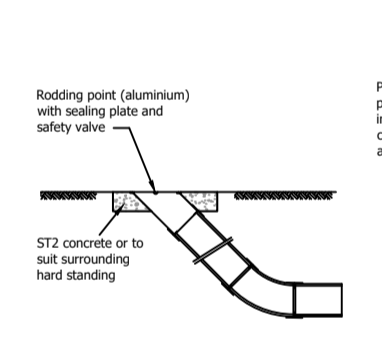


- PRIVATE DRAINAGE NOTES**
- THE CONTRACTOR IS TO CONFIRM THE POSITIONS, SIZES AND LEVELS OF ALL EXISTING SERVICES ON THE SITE AND ARRANGE FOR ANY DIVERSIONS THAT MAY BE REQUIRED.
  - PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH PART H1 OF THE BUILDING REGULATIONS 2010.
  - THE INVERT OF THE HORIZONTAL DRAIN AT THE BASE OF A STACK TO BE NOT LESS THAN 40mm BELOW THE CENTRE LINE OF THE LOWEST BRANCH PIPE. LEVEL TO BE SET TO ENSURE THAT AT LEAST 50mm CLEARANCE TO FOOTINGS.
  - MINIMUM GRADIENT OF UNDERSLAB DRAINAGE TO BE:  
100mm 1 in 40  
150mm 1 in 60 (min 1 WC)  
150mm 1 in 100 (min 5 WC)
  - DRAIN TRENCHES SHOULD NOT BE EXCAVATED LOWER THAN THE FOUNDATIONS OF ANY BUILDING NEARBY UNLESS EITHER:  
a) WHERE THE TRENCH IS WITHIN 1m OF THE FOUNDATION THE TRENCH IS FILLED WITH CONCRETE UP TO THE LOWEST LEVEL OF THE FOUNDATION OR  
b) WHERE THE TRENCH IS FURTHER THAN 1m FROM THE BUILDING, THE TRENCH IS FILLED WITH CONCRETE TO A LEVEL BELOW THE LOWEST LEVEL FOR THE BUILDING EQUAL TO THE DISTANCE FROM THE BUILDING LESS 100mm.
  - WHERE TWO CLAY PIPES CROSS WITH LESS THAN 800mm SEPARATION SURROUND EACH WITH GENE CONCRETE FOR NOT LESS THAN 7m CENTRED ON THE CROSSING POINT. EXTEND CONCRETE SURROUNDS AS NECESSARY TO WITHIN 100mm OF THE NEXT NEAREST FLEXIBLE JOINT.
  - CONCRETE PROTECTION SHALL BE PROVIDED TO ALL UPVC PIPES WITH LESS THAN 600mm COVER AND TO ALL CLAY PIPES WITH LESS THAN 300mm COVER.
  - WHERE A PIPE PASSES THROUGH A WALL AN OPENING IS TO BE FORMED THROUGH THE WALL TO GIVE AT LEAST 50mm CLEARANCE AROUND THE PIPE. BRICKWORK OVER SHALL BE SUPPORTED BY A Lintel. THE OPENING IS TO BE MADE SUCH SIZE OF THE OPENING WITH RIGID SHEET MATERIAL.
  - GRANULAR SURROUND TO PIPES TO BE TO BS 882. WHERE CONCRETE SURROUND IS REQUIRED TO PIPES IT IS TO BE GENE WITH VERTICAL JOINTS FORMED AT THE FACE OF EACH FLEXIBLE JOINT USING 10mm THICK COMPRESSIBLE BOARD.
  - BACKFILL TO TRENCHES MAY BE SUITABLE EXCAVATED MATERIAL IN LANDSCAPED AREAS. TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARD STANDING AND ROADS.
  - ALL PRIVATE DRAINS TO BE 100mm DIAMETER UNLESS OTHERWISE SHOWN ON DRAWING.
  - ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124 MANHOLE COVERS WITH BLOCK PAVED AREAS AND BUILDINGS SHALL BE RECESSED. COVER STRENGTHS TO BE:  
CLASS C200 IN LIGHTLY TRAFFICED AREAS (CAR PARK, AISLES & CAR PARK SPACES).  
CLASS F200 WITH MIN 100mm DEEP FRAME IN LANDSCAPED AND NON TRAFFICED AREAS (PLANTING, PEDESTRIAN AREAS ETC).  
CLASS F400 IN ALL OTHER AREAS.  
13. THE LEVELS AND POSITIONS OF ALL EXISTING MANHOLES AND LATERALS ARE TO BE CHECKED ON SITE PRIOR TO ANY WORKS COMMENCING. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER.
  - RAINWATER PIPES AND INTERNAL FOUL CONNECTION POINTS ARE TO BE CONFIRMED BY THE ARCHITECT.

**MINIMUM DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS**

Type	Depth to invert from cover level (m)	Internal sizes		Cover sizes	
		Length x width (mm x mm)	Circular (mm)	Length x width (mm x mm)	Circular (mm)
Roofing eye		As draw but min 100		Same size as pipework	
Access Fitting	Small	150 Dia 150 x 100	150	150 x 100	150 x 100
	Large	225 x 100 225 x 100	225	225 x 100	225 x 100
Inspection chamber	Shallow	0.6 or less	225 x 100 450 x 450	190 450	190 450
	Deep	1.2 or less	450 x 450	450	450
		> 1.2	450 x 450	450	Max 300 x 300



**PIPE BEDDING AND TRENCH WIDTH FOR TYPE B BEDDED PIPES**

Nominal Pipe (mm)	Granular Bedding Material	Trench Width (mm)
100	Single layer	140mm
150	Single layer	190mm
150	10-14mm	14-200mm

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  - This drawing should be read in conjunction with all other relevant drawings and specifications.
  - Do not scale from this drawing; only written dimensions should be used. If in doubt contact SNR ENG Ltd. If received electronically it is the responsibility of the recipient to print this drawing to the correct scale.
  - All dimensions are in metres unless noted otherwise.
  - The contractor shall prior to construction check and verify that the details shown on this drawing are fully compatible with any constructed dimensions or levels. Any discrepancies should be immediately reported in writing to SNR ENG Ltd.
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REV	DESCRIPTION	DATE	BY	AUTH
A	LATEST LAYOUT INCORPORATED & ATTENUATION UPDATED.	23.10.23	RAK	RAK

**SNR ENG Ltd**  
Senior Engineering.

Registered Office:  
The Coach House  
Church Road  
Oxley  
Wolverhampton  
WV10 6AB

info@snr-eng.co.uk  
www.snr-eng.co.uk

Civil Engineering Design | Utilities Design Consultancy

CLIENT  
**D.R & F.A FORD TRANSPORT LTD**

PROJECT  
**UNIT C9, WEM INDUSTRIAL ESTATE, SOULTON ROAD, WEM SY4 5SD**

TITLE  
**DRAINAGE STRATEGY**

DRAWN <b>RAK</b>	APPROVED <b>RAK</b>	SCALE <b>1:500 @ A1</b>	DATE <b>JUL '23</b>
PROJECT NO. <b>2304005</b>		DRAWING NO. <b>100</b>	REV <b>A</b>

**FOR PLANNING**

- KEY:**
- EXISTING SURFACE WATER DITCH
  - STORM INSPECTION CHAMBER
  - STORM WATER DRAIN (ALL PIPES ARE 1500 UNLESS STATED OTHERWISE)
  - STORM HYDRO-BRAKE WITH SUMP (MAX. 5.0 l/s) (OR SIMILAR APPROVED)
  - WAVIN AQUACELL CELLULAR ATTENUATION (OR SIMILAR APPROVED)
  - OVERLAND WATER FLOW ROUTE IN THE EVENT OF EXCEEDANCE OR BLOCKAGE OF THE DRAINAGE SYSTEM
  - FOUL INSPECTION CHAMBERS
  - FOUL WATER DRAIN (ALL PIPES ARE 1500 UNLESS STATED OTHERWISE)

