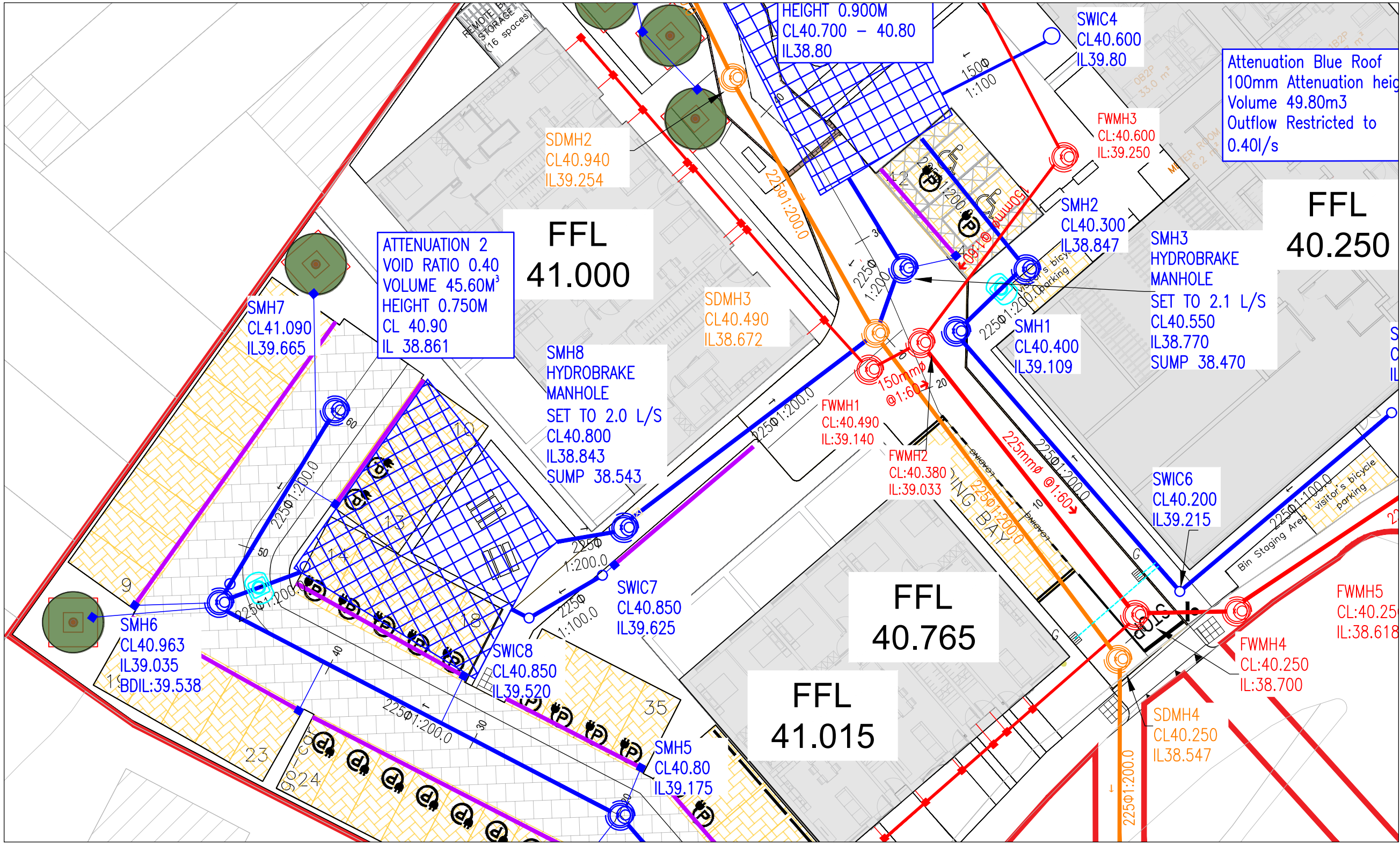


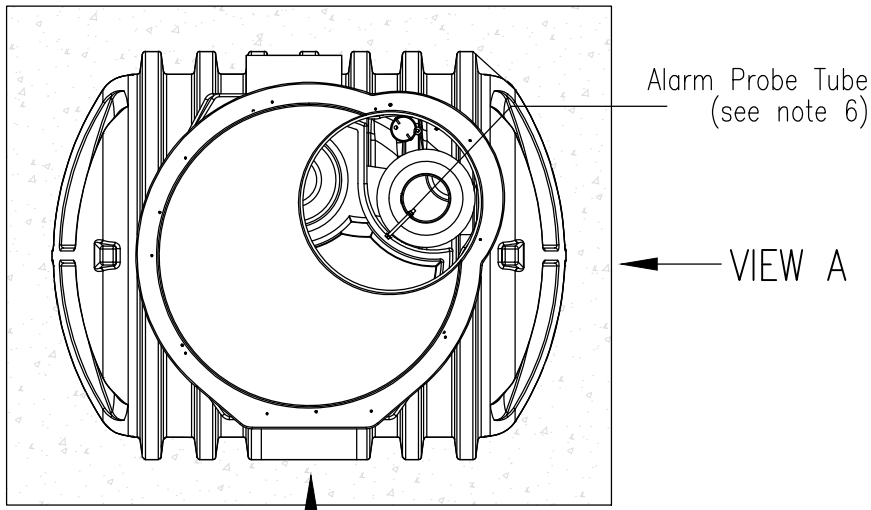


PLAN VIEW
SCALE 1: 500 @A1

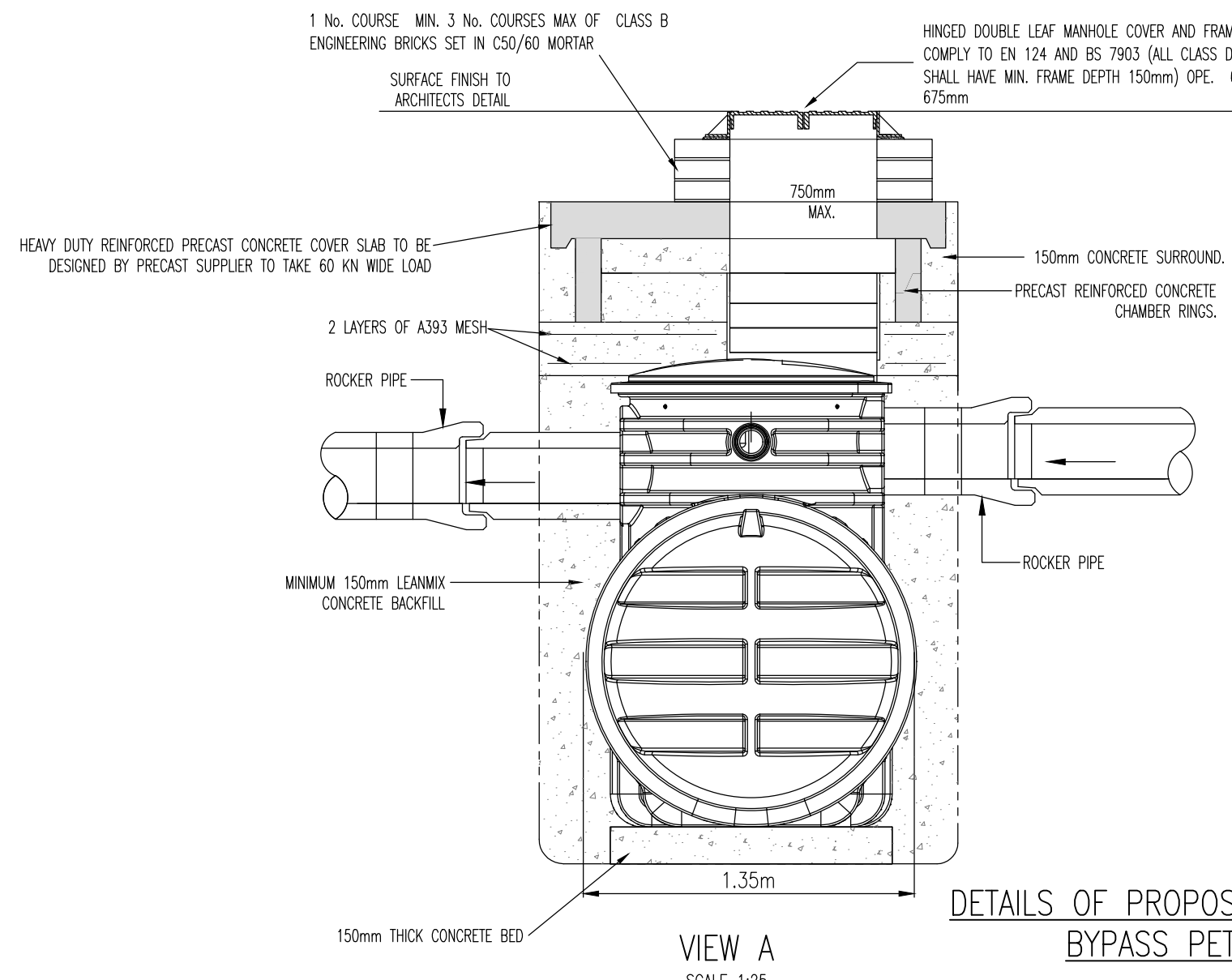
Notes:-

- Inlet/Outlet pipes are plain pipe standard EN 858 slots minimum connection sizes, units ordered with different sized connections are not fully compliant with the standard.
- Extension necks for deeper inverts can be provided. These can be cut in 200 mm sections. Max 2.0m Invert recommended. Please ask our sales department for further details.
- All units require appropriate cover and frame to suit applied loadings.
- This drawing should be used for dimensional information only it is essential that this drawing is read in conjunction with the installation guidelines from the supplier. 76 mm tube (internal) is supplied to house an oil alarm probe.
- Wet site conditions - Concrete Backfill Dry site conditions - Pea Shingle Backfill
- A Ø 76 mm tube (internal) is supplied to house an oil alarm probe.

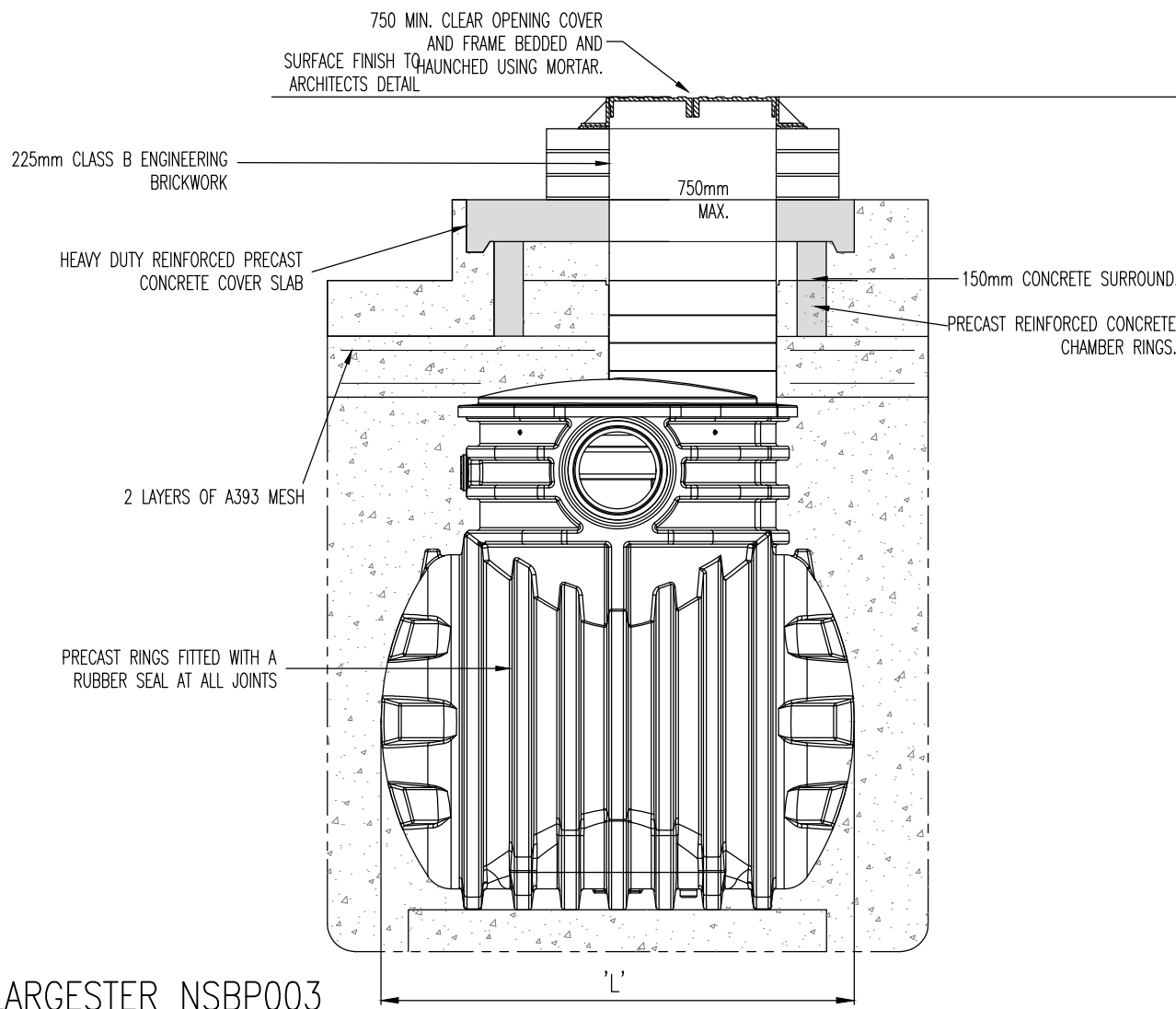
Outlet Size 'B'	Inlet Size 'A'	Fall across unit	Approx Empty Weight (kgs)	Dim L (mm)	Nominal Flow	Unit Ref No
Ø225 mm	Ø225 mm	100	180	1700	3 L/s	NSBP003



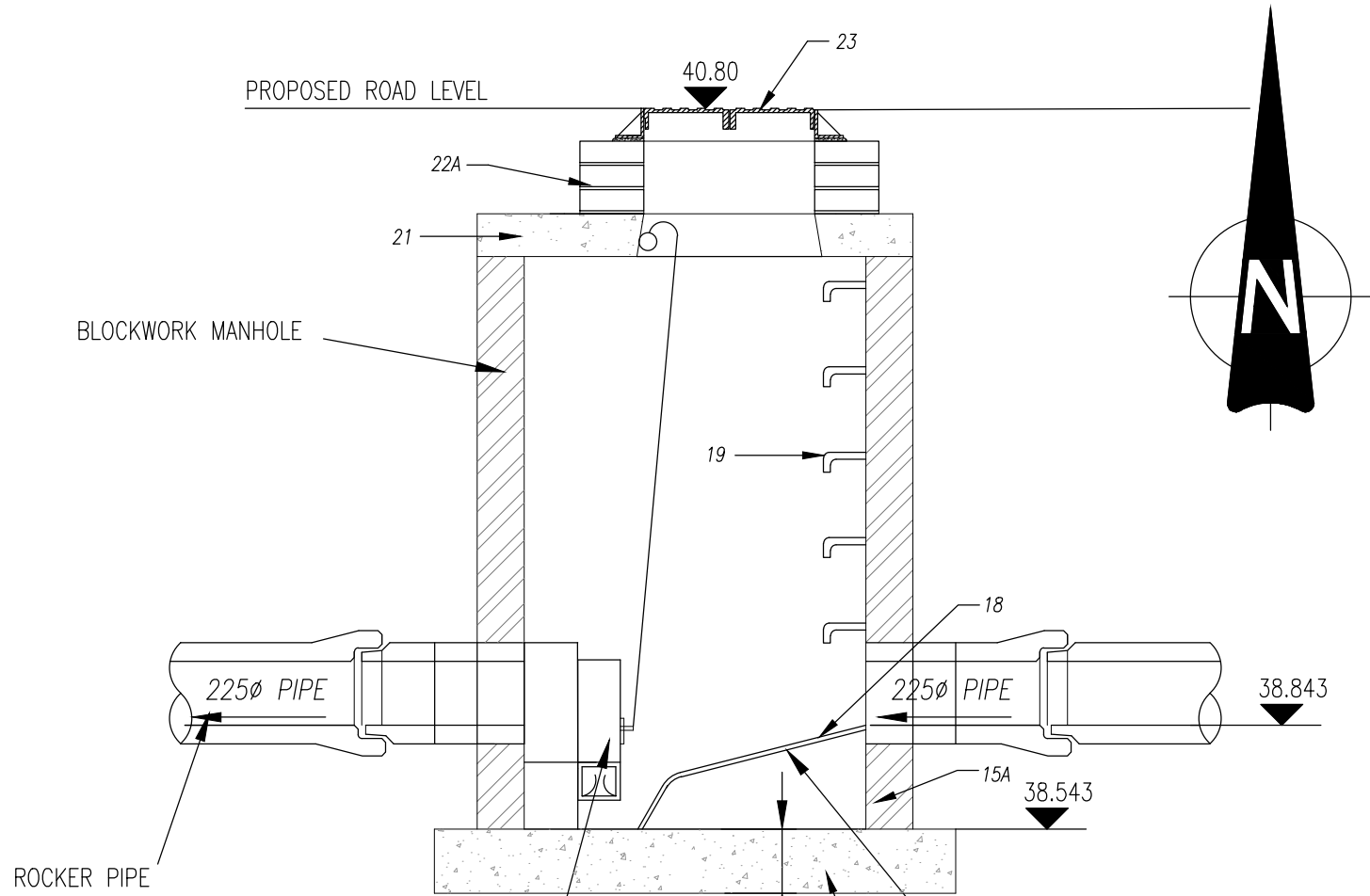
VIEW B
PLAN VIEW
SCALE 1:25



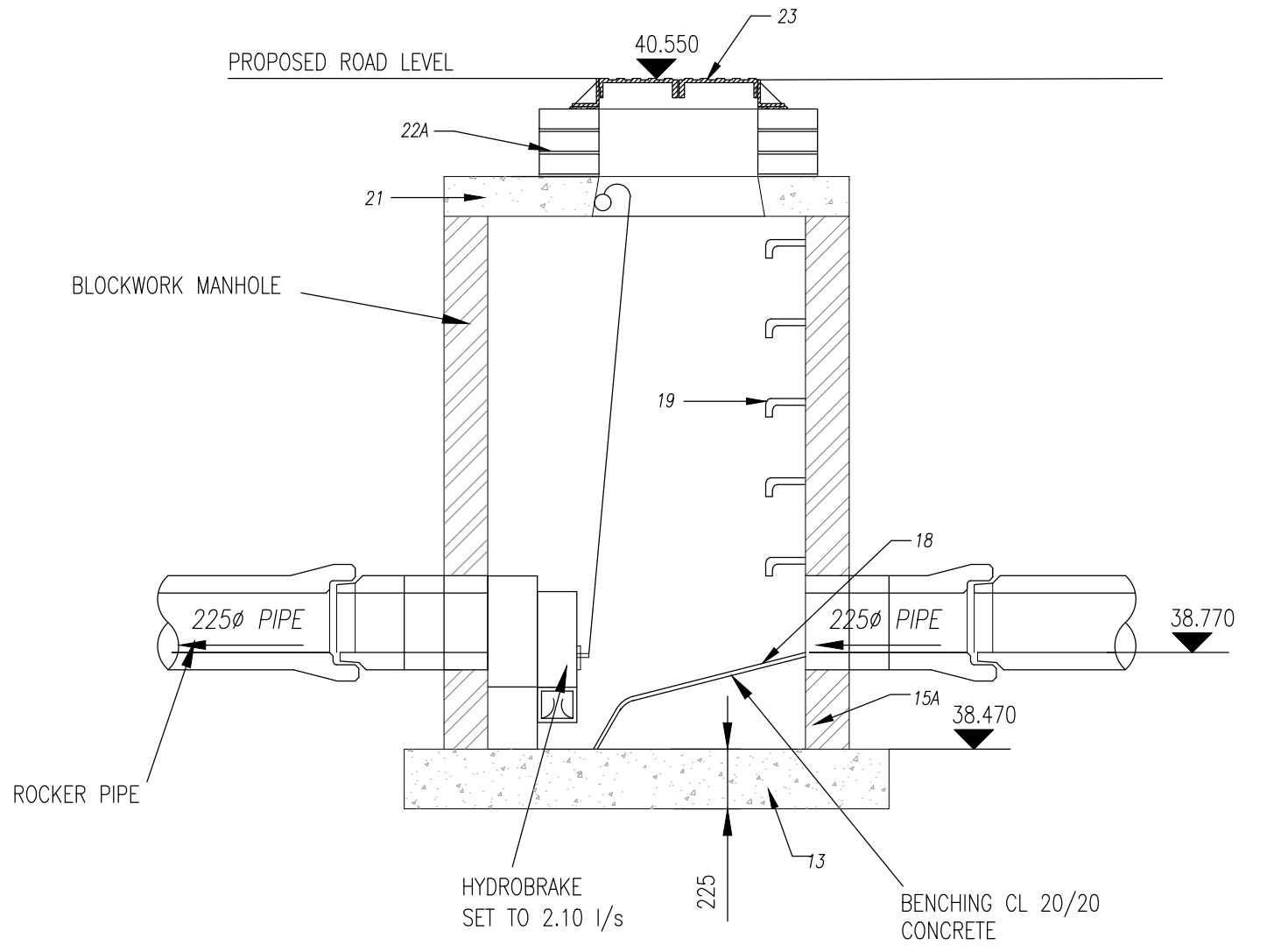
DETAILS OF PROPOSED KLARGESTOR NSBP003
BYPASS PETROL INTERCEPTOR



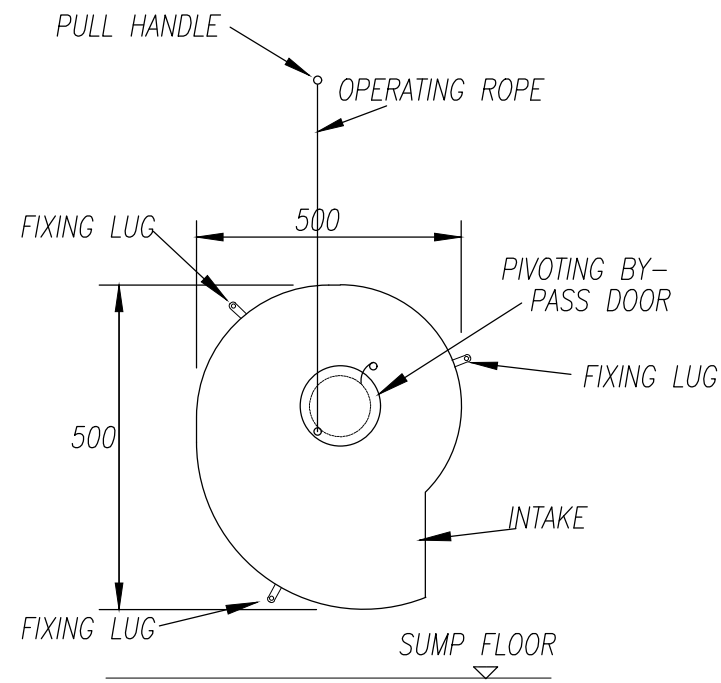
VIEW B
SCALE 1:25



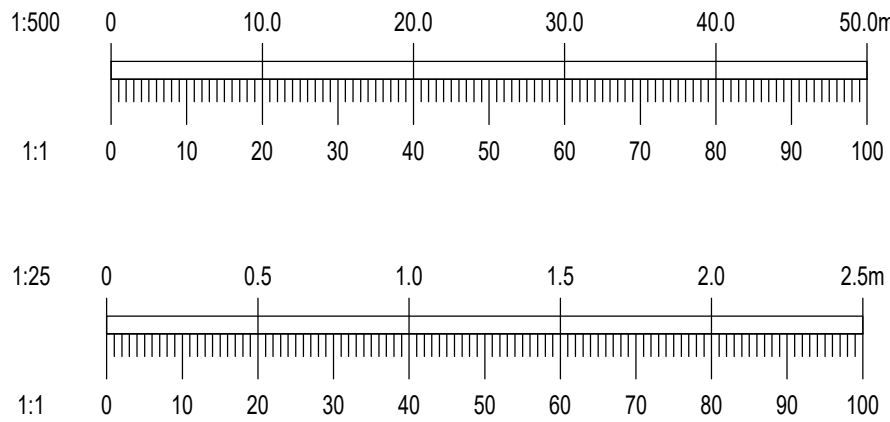
TYPICAL HYDROBRAKE MANHOLE DETAIL
SCALE 1:25 @A1



TYPICAL HYDROBRAKE MANHOLE DETAIL
SCALE 1:25 @A1



HYDRO BRAKE DETAIL
N.T.S.



This drawing should not be scaled. Dimensions to be verified on site.
Any discrepancies should be referred to the Engineer prior to work being put in hand.
This drawing is the property of Waterman Moylan Consulting Engineers Limited and is
wholly or in part without the consent in writing of
Waterman Moylan Consulting Engineers Limited
Block S East Point Business Park, Dublin D03 H3F4 Ireland
1-855 1 864 8900

- ALL WORKS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE REQUIREMENTS OF DUBLIN CITY COUNCIL AND TO THE GUIDANCE SET OUT IN THE GREATER DUBLIN REGIONAL CODE OF PRACTISE FOR DRAINAGE WORKS
- TYPE A GRANULAR FILL SHALL CONSIST OF 100mm ATTENUATION BLUE ROOF 100mm ATTENUATION HEIGHT VOLUME 49.80m³ OUTFLOW RESTRICTED TO 0.40L/S
- SELECTED FILL SHALL BE FREE FROM DEBRIS, STONES, COBBLES, TWIGS, RUBBISH, VEGETABLE MATTER AND LUMPS OF CLAY OTHER THAN MARL, RECLAIM AND BENCHING IN 150MM LAYERS.
- WHERE SUITABLE PREVIOUSLY EXCAVATED MATERIAL IS USED FOR BACKFILLING, THIS MATERIAL SHALL BE COMPACTED IN 300MM LAYERS.
- CONCRETE BED AND SURROUND SHALL BE USED ON ALL PIPES WHERE COVER TO THE SOFFIT OF THE PIPE IS LESS THAN 1.2M IN ROADS, FOOTPATHS AND GRASS MARGINS AND 0.9M IN OPEN SPACES AND FIELDS.
- ALL CONCRETE FOR PIPE BEDDING, HAUNCHING AND SURROUNDS SHALL BE GRADE 20N/40 UNLESS OTHERWISE STATED.
- ALL PIPE TRENCHES / EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED STRICTLY IN ACCORDANCE WITH REQUIREMENTS OF CLAUSE 808, NRA SPECIFICATION FOR ROAD WORKS.
- ALL HOUSE DRAINS SHALL BE EITHER PVC, CONCRETE OR VITRIFIED CLAY IN ACCORDANCE WITH CURRENT IRISH STANDARDS.
- ALL FOUL SEWERS SHALL BE EITHER IN-SITU CONCRETE OR BLOCKWORK WITH INTERIOR BRICK LINING.
- PRIVATE DRAINS SHALL BE DISCONNECTED FROM PUBLIC SEWERS BY THE INSTALLATION OF AN INTERCEPTING TRAP.
- 225MM THK. CL. 20/20 MASS CONCRETE FOUNDATIONS.
- PREFORMED HALF CIRCLE CHANNEL PIPES. THE PIPELINE MAY WHERE PRACTICABLE, BE LAID THROUGH THE MANHOLE AND THE CROWN BROKEN OUT TO HALF DIAMETER, PROVIDED FLEXIBLE JOINTS ARE SITUATED ON EACH SIDE NO FURTHER THAN 600MM FROM THE INNER FACE OF MANHOLE WALL.
- FOR SURFACE WATER MANHOLES HIGH DENSITY BLOCKS TO CL 510 OF IS:20 PART 1: 1987 OR CL 30/20 IN-SITU CONCRETE. BLOCKWORK SHALL BE BEDDED AND JOINTED USING MORTAR DESIGNATION 3 TO IS:406. BEDS AND VERTICAL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID. JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS. ALL FOUL MANHOLES MUST BE FACED IN SOLID ENGINEERING BRICK (MIN. CLASS A OR B) OR IN-SITU CONCRETE FOR 1 METRE ABOVE BENCHING LEVEL.
- FOR MANHOLES > 3m DEPTH TO INVERT USE 30N/20 IN-SITU CONCRETE REINFORCING MESH REF. A393 Ø 6.16kg/m TO BE FIXED AT MID POINT OF WALL. ADDITIONAL REINFORCEMENT TO BE SUPPLIED OVER PIPE CROWN.
- BRICK RELIEVING ARCH 113MM THICK FOR PIPES 225MM DIAM. OR LARGER. ALTERNATIVELY A REINFORCED CONCRETE LINTEL MAY BE USED. WORK SIZE OF BRICKS 215 X 103 X 65THK. RELIEVING ARCHES USED IN BRICK OR BLOCKWORK MANHOLES.
- BENCHING AND PIPE CHANNEL PIPE SURROUND - CL. 22.5/20 CONCRETE.
- BENCHING FINISHED IN 2:1 SAND-CEMENT MORTAR WITH A SMOOTH TROWEL FINISH, LEVEL WITH PIPE SOFFIT AT 1 IN 30 SLOPE TOWARDS CHANNEL.
- GALVANISED RUNGS AT 300°C VERTICALLY EMBEDDED TO A DEPTH OF 125mm INTO MANHOLE WALLS OVER BENCHING AS DIRECTED BY DRAINAGE ENGINEER.
- OPE. IN ROOF SLAB POSITIONED SO THAT THE EDGE OF OPENING IN THE FRAME IS VERTICALLY ABOVE THE FRONT EDGE OF RUNGS OR LADDERS.
- 200THK. IN-SITU R.C. ROOF SLAB IN CL.30/20 CONCRETE. COVER TO STEEL SHALL BE 40MM.
- 1 TO 2 NO. ENGINEERING BRICKS CL. B TO I.S. 91:1983 SET IN 1:3 (CEMENT SAND MORTAR). 22B. AN ACCESS SHAFT 225mm THICK SHALL BE BUILT IN SOLID ENGINEERING BRICK CLASS A OR B OR IN SOLID CONCRETE BLOCKS DESIGNATION S10, STRENGTH 10N/mm² TO SEAT THE MANHOLE COVER AND FRAME. THE MINIMUM DEPTH OF SHAFT SHALL BE 450mm.
- GRADE A MANHOLE COVER AND FRAME TO I.S.124:1994 CLASS D400 NO.2 1988 SET ON 13MM THK. CEMENT MORTAR BED AND FRAMES HAUNCHED OVER SIDES WITH CEMENT MORTAR. MANHOLE COVERS SHALL HAVE A CLEAR OPE. OF 600MM. DIAM. FOR SEWERS LESS THAN 1M. DIAM. MANHOLE COVERS ON SEWERS 1M. DIAM. OR GREATER SHALL HAVE A 600 X 600 CLEAR OPE. MANHOLE COVERS SHALL BE AT LEAST 100MM. DEEP.
- BACKDROP MANHOLES SHALL HAVE A HEAVY DUTY CLASS D400 COVER AND FRAME FITTED AT GROUND LEVEL TO THE INLET PIPE ON THE BACKDROP.
- SHORT LENGTH PIPE, PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF THE MANHOLE WALL. SHORT LENGTH PIPES SURROUNDED IN 150mm THICK CL. 22.5/20 CONCRETE.
- WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.0M. LADDERS SHALL BE USED INSTEAD OF RUNGS. THEY SHOULD BE LOW CARBON STEEL AND HOT DIPPED AFTER FABRICATION.
- LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT INTERVALS OF NOT MORE THAN 3.0M. STRINGERS SHOULD BE BOLTED TO CLEATS TO FACILITATE RENEWAL.
- ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC. SHALL BE HOT DIP GALVANISED TO B.S.729.
- SOCKET OF PIPE MAY BE INSIDE MANHOLE FOR CONVENIENCE OF BRICK ARCH OVER PIPE.
- ALL MANHOLES SHALL BE WATERTIGHT TO THE SATISFACTION OF THE ENGINEER.
- FORMWORK TO REINFORCED CONCRETE AND MASS CONCRETE SHALL BE CLASS F2.
- CLASS U2 FINISH TO THE TOP OF SLABS.
- PLAN DIMENSIONS OF MANHOLES ARE BASED ON BLOCKWORK HAVING A CO-ORDINATING SIZE OF 450 X 225 X 100.
- MANHOLES ARE DESIGNED TO B.S.8005 AND WALL THICKNESSES TO I.S.325 TAKING GRANULAR FILL PRESSURE AND H.B. SURCHARGE.
- REINFORCEMENT TO SLABS TO ENGINEERS DETAILS.
- CHAMBER SHALL BE FACED INTERNALLY WITH SOLID ENGINEERING BRICKS CLASS A OR B COMPLYING IS 91:1983 TIED INTO BLOCKWORK FOR A HEIGHT OF 1m OVER BENCHING. JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS.
- VERTICAL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID IN PLACE MIN. WALL THICKNESS TO BE 225mm.
- TOE HOLES OF 230mm MINIMUM DEPTH AND GALVANISE STEEL SAFETY RAILINGS TO BE PROVIDED IN BENCHING AT SEWERS GREATER THAN 525mm DIA. AND DEPTH TO INVERT >3m FOR ACCESS TO INVERT.
- A SAFETY CHAIN IS TO BE PROVIDED ON PIPES THAT EXCEEDS 450mm DIA. MILD SAFETY CHAIN SHALL BE 10mm NOMINAL SIZE GRADE M (H) NON-CALIBRATED CHAIN, TYPE 1, COMPLYING WITH BS 4942 PART 2 OR EQUIVALENT.

Rev	Date	Description	By	Chk
Amendments				
Project PROPOSED RESIDENTIAL DEVELOPMENT ELLENFIELD PLACE, BEAUMONT ROAD, DUBLIN 9				
Title PROPOSED HYDROBRAKE AND PETROL INTERCEPTOR DETAILS				
Client URBAN LIFE				
Status FOR PLANNING ONLY				
Designed By	BL	Approved	BG	Waterman Ref 20-048
Drawn By	SH	Date	SEPT.2026	Project Ref AS SHOWN @A1
Project - Originator - Volume - Level - Type - Role - Number				Revision
PRD - WMC - ZZ - XX-DR- C - P2240				-