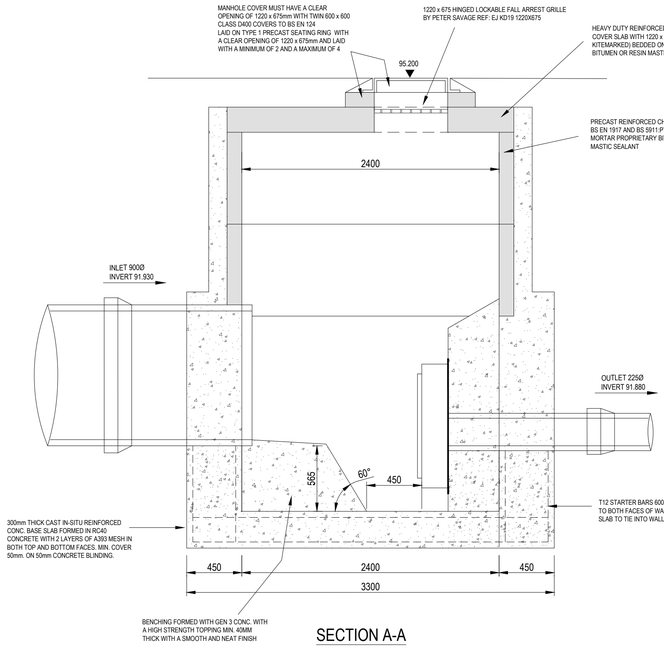
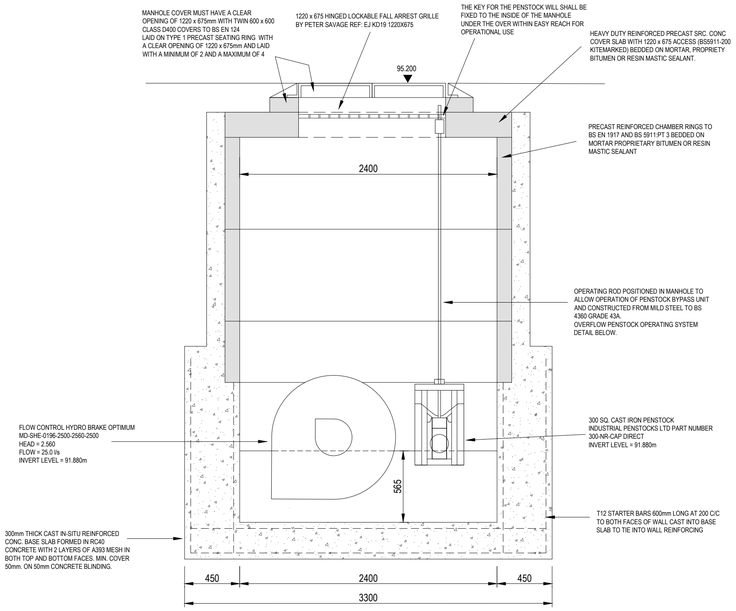
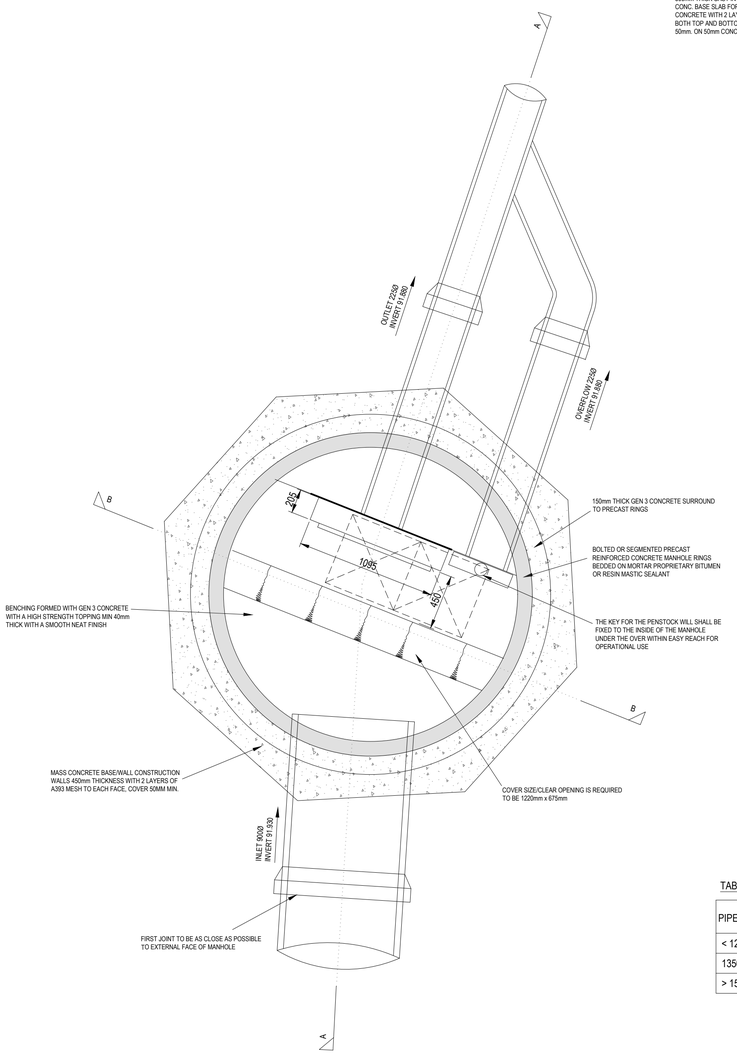
YORKSHIRE WATER REF
H-3-264-963



SECTION A-A



SECTION B-B



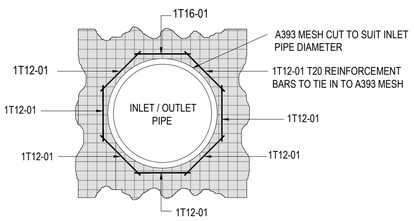
NOTE: ALL CUSTOM BUILT IRONWORK TO BE HOT-DIPPED GALVANIZED PRIOR TO FINAL FIXING

NOTE: ALL DRAINAGE WORK AND MATERIALS TO CONFORM TO 'CODE FOR ADOPTION'

PIPE DIA. mm	ROCKER PIPE LENGTH
150-450	0.50-0.75
451-750	0.75-1.00
>750	1.25

TABLE 1

PIPE SIZE	BAR SIZE
< 1200mm	T12
1350 - 1500mm	T16
> 1500mm	T20



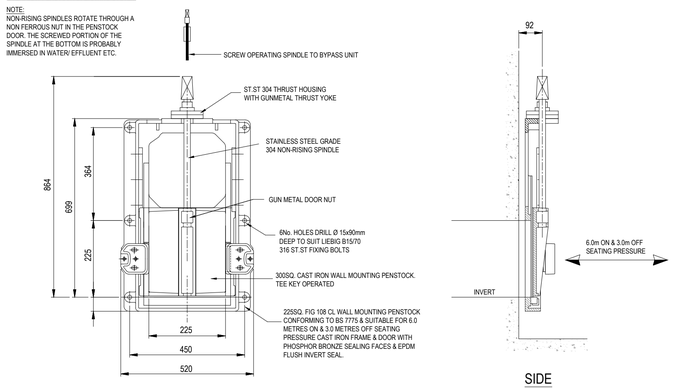
REINFORCEMENT SECTION

See Table 1 For Bar Sizes Required

PENSTOCK DETAIL

OVERFLOW PENSTOCK OPERATING SYSTEM

NOTE:
NON-RISING SPINDLES ROTATE THROUGH A NON FERROUS NUT IN THE PENSTOCK DOOR. THE SCREWED PORTION OF THE SPINDLE AT THE BOTTOM IS PROBABLY IMMERSED IN WATER/ EFFLUENT ETC.



ELEVATION

SIDE

Only PDF/ DWF Issues of this drawing are controlled. All other formats (eg. DWG AutoCAD FILES) are UN-controlled and are used at your own risk.

GENERAL NOTES:-

1. DO NOT USE THIS DRAWING IN ISOLATION. THIS DRAWING HAS BEEN PREPARED AS PART OF A SET, AND MUST THEREFORE BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORKS.
2. THIRD PARTY INFORMATION IS USED TO PREPARE THE ENGINEERING DESIGN (INCLUDING ARCHITECTURAL LAYOUT, GROUND INVESTIGATION, EXISTING UTILITIES RECORDS, AND SPECIALIST DESIGN ITEMS). THE ENGINEERING DESIGN MUST THEREFORE BE READ IN CONJUNCTION WITH ALL THIRD PARTY INFORMATION PRIOR TO COMMENCING WORK. QUEENSBERRY DESIGN LTD ARE NOT RESPONSIBLE FOR ANY THIRD PARTY INFORMATION OR DETAILS.
3. DRAWING STATUS WILL REMAIN PRELIMINARY UNTIL FULL TECHNICAL APPROVAL IS RECEIVED FROM LOCAL AUTHORITY AND SEWERAGE UNDERTAKER. WORKS COMMENCED PRIOR TO TECHNICAL APPROVAL ARE DONE SO AT RISK AND MAY BE SUBJECT TO CHANGE.
4. THE CONTRACTOR IS EXPECTED TO PREPARE APPROPRIATE CONSTRUCTION METHOD STATEMENTS FOR ALL ASPECTS OF APPOINTED WORK. THIS SHOULD INCLUDE ANY TEMPORARY PROTECTION / WORKS.
5. LAND DRAINAGE IS NOT PERMITTED TO DISCHARGE INTO THE PUBLIC SEWER NETWORK. ANY NEED FOR LAND DRAINAGE SHOULD BE ASSESSED BY THE GROUND WORKER AND LANDSCAPER DURING CONSTRUCTION AND PLACEMENT OF GARDENS ON AN INDIVIDUAL PLOT BASIS. IF LAND DRAINAGE DESIGNS ARE REQUIRED, THEY SHOULD BE APPOINTED PRIOR TO PLOT COMPLETION.
6. THE CONTRACTOR IS EXPECTED TO CROSS CHECK ALL DRAINAGE INVERTS PRIOR TO COMMENCING WORK, THIS MAY INVOLVE COMPLETION OF TRIAL HOLES IF INVERT LEVELS HAVE BEEN INTERPOLATED. THE POSITION, LINE AND DIAMETER OF ALL EXISTING DRAINAGE APPARATUS SHOULD BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR MUST MONITOR THE "AS BUILT" PROGRESS OF EACH CONSTRUCTION STAGE (ROADS/SEWERS/PLOT WORKS ETC), TO ENABLE THE NEXT STAGES OF CONSTRUCTION TO BE CHECKED BEFORE INSTALLATION.

HIGHWAYS

1. ALL HIGHWAY WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION.
2. ALL EXCAVATIONS BELOW PROPOSED AND EXISTING HIGHWAYS TO BE BACK FILLED WITH GRANULAR TYPE 1 SUB. BASE AND WELL COMPACTED IN LAYERS NOT EXCEEDING 150MM. UNLESS OTHERWISE AGREED.
3. HIGHWAY AUTHORITY TO BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.

ADOPTABLE DRAINAGE

1. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "CODE FOR ADOPTION". THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATERS STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED
2. MANHOLE COVERS SHALL/MUST HAVE A CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT
4. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAINLAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR IN DIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY. LAND DRAINAGE SECTION REGARDING THE DISPOSAL OF THE FILTER DRAINLAND DRAINAGE RUN-OFF
5. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS
6. SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES OR THE WIDTH OF THE CANOPY AT MATURE HEIGHT.
7. SEWERS TO BE LAID IN CLASS "S" BEDDING (150MM GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND VERGES (OR LESS THAN 900MM IN NONVEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND
8. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2).
9. YORKSHIRE WATER POLICY IS THAT TYPE "C" BRICK MANHOLES AND 1050MM DIAMETER MANHOLE RINGS ARE NOT PREFERRED. INSTEAD, IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200MM DIAMETER OR 1500MM DIAMETER RINGS, WITH THE OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1 - 1.5M
10. ADOPTABLE PLASTIC SEWER PIPES TO BE BSI KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BSEN13476). ADOPTABLE PLASTIC SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD REQUIRE CLAY WARE CHANNEL IN MANHOLES
11. THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 100MM DIA. 40KN/M. 150MM DIA. 40KN/M. 225MM DIA. 49KN/M AND 300MM DIA. 72KN/M. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE - (CLASS120 TO EN 1916/BS5911-1 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13476
12. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE
13. THERE MUST BE ENOUGH CLEARANCE AT CROSSOVERS TO ACCOMMODATE BEDDING TO BOTH PIPES, APPROX 300MM - IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY NEED TO BE INCREASED".

DRAINAGE WITHIN HIGHWAY

1. ALL DRAINAGE INCLUDING ACCESS MANHOLES WITH INTERNAL DIAMETER OF >0.9m SHALL BE HIGHWAY STRUCTURES UNDER CG300 - TECHNICAL APPROVAL FOR HIGHWAY STRUCTURES.
2. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH CODE FOR ADOPTION AND NATIONAL SPECIFICATION DESIGN MANUAL FOR ROADS AND BRIDGES
3. ALL PCC UNITS IN OVERSIZE MANHOLES MUST HAVE A DESIGN WORKING LIFE OF 100 YEARS (MIN) IN ACCORDANCE WITH BS 8500-1:2015+A2:2019-TABLE A5.
4. PRECAST CONCRETE MANHOLE UNITS INCLUDING THEIR PCC COVER SLABS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1917 AND BS 5911-3 AND SHALL BE MANUFACTURED FROM CONCRETE WITH A DESIGN CHEMICAL CLASS DC-4 UNLESS SATISFACTORY EVIDENCE THROUGH SOIL ANALYSIS CAN BE PROVIDED THAT A LOWER CLASS WILL RESIST ATTACK FROM SOILS AND GROUND WATER.
5. PRECAST CONCRETE CORBEL SLABS SHALL COMPLY WITH BS 5911-3 TABLE 3 AND FIGURE 8.
6. PROOF BY PHOTOGRAPHIC RECORD THAT PRECAST CONCRETE MANHOLE SHAFT UNITS, CIRCULAR COVER, REDUCING AND LANDING SLABS TOGETHER WITH ALL OTHER ANCILLARY UNITS INTENDED FOR INSTALLATION IN THE HIGHWAY ARE MARKED WITH BS EN 1917 & BS 5911-3.
7. COVER SLABS SHALL BE INSTALLED WITH A MINIMUM OF 300mm COVER TO FINISHED GROUND LEVEL.
8. SUBMISSION OF A CONSTRUCTION COMPLIANCE CERTIFICATE SHALL BE PROVIDED UPON COMPLETION OF DRAINAGE WORKS

EXISTING SERVICES

PRIOR TO THE COMMENCEMENT OF ANY WORKS UNDER GROUND MAPPING SURVEYS AND CONSTRAINTS PLAN IS TO BE REFERED TO ANY DISCREPANCIES ARE TO BE REPORTED TO ENGINEER.

ANY EXISTING SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS SHOULD BE LOCATED BY MEANS OF A HAND DIG IN CLOSE LIAISON WITH THE STATUTORY SERVICE AUTHORITIES. THE CONTRACTOR SHALL INFORM THE DEVELOPER OF ANY SERVICES THAT MAY AFFECT THE PROPOSED DESIGN. CONTRACTOR TO NOTIFY STATUTORY SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF WORK. AS CONSTRUCTED INFORMATION IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE FOLLOWING AS CONSTRUCTED DRAWINGS TO THE DEVELOPER UPON THE COMPLETION OF THE WORKS COVERED BY THE CONTRACT :-

1. POSITION/CO-ORDINATES OF ALL ADOPTABLE MANHOLES.
2. INVERT AND COVER LEVELS OF ALL ADOPTABLE MANHOLES.
3. NEW GULLY POSITIONS AND CONNECTIONS.
4. POSITION AND DEPTH OF SERVICE DUCTS FOR WATER, GAS, ELECTRIC, BT, CABLE AND STREET LIGHTING, STATING SIZE AND NUMBER OF DUCTS.

Rev.	Date	Revision Details	Drawn	Checked
H	14.10.25	UPDATED TO SUIT LATEST OUTFALL FOLLOWING ECOLOGICAL REPORT AND PLANNING CONDITIONS	CW	ND
G	20.06.25	CONSTRUCTION ISSUE	CW	ND
F	05.08.24	NOTED AMENDED	ND	ND
E	22.07.24	PENSTOCK KEY NOTE ADDED	ND	ND
D	03.04.24	COVERS CHANGED TO 600 X 600	ND	ND
C	19.03.24	INVERT LEVELS AMENDED - CONTROL UNIT REFERENCE CHANGED	ND	ND
B	06.09.23	150Ø CONNECTION ADDED - YORKSHIRE WATER COMMENTS ADDED	ND	ND
A	28.02.23	CONTROL DETAIL UPDATED TO LATEST SURFACE WATER DESIGN	ND	ND
-	18.02.22	FIRST ISSUE	ND	ND

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Client: STRATA HOMES

Project: WESTGATE, CLECKHEATON

Title: FLOW CONTROL

Drawn	Checked	Date
FA	ND	16.02.2022

Drawing Number: QD1776-08-03

Drawing Status	Scale	Rev.
CONSTRUCTION	1:25 - A1	H