

MINIMUM MANHOLE DIAMETERS	
LARGEST PIPE DIA. (mm)	INTERNAL DIA. OF MANHOLE (mm)
LESS THAN 150Ø	1500

ROCKER PIPE LENGTH	
PIPE DIA. (mm)	ROCKER PIPE LENGTH (mm)
150 to 600	600
GREATER THAN 600 to 750	1000
GREATER THAN 750	1250

**DIMENSION SHALL BE SCALED FROM THIS DRAWING. ALL DIMENSIONS  
ALL BE SITE CHECKED. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY  
ANY DISCREPANCIES BEFORE WORK PROCEEDS**

Notes :-

GENERAL NOTES :-

- ALL BRICK TO BE SOLID ENGINEERING BRICK  
CLASS A OR B
- FOR PIPE DIAMETER >750mm USE MANHOLE WITH  
INTERNAL DIAMETER SIZE= PIPE SIZE + 1 METRE +  
300mm
- DISTANCE FROM THE TOP RUNG OF THE LADDER  
TO GROUND LEVEL MUST BE A MAXIMUM OF  
500mm.

### IRISH WATER NOTES:

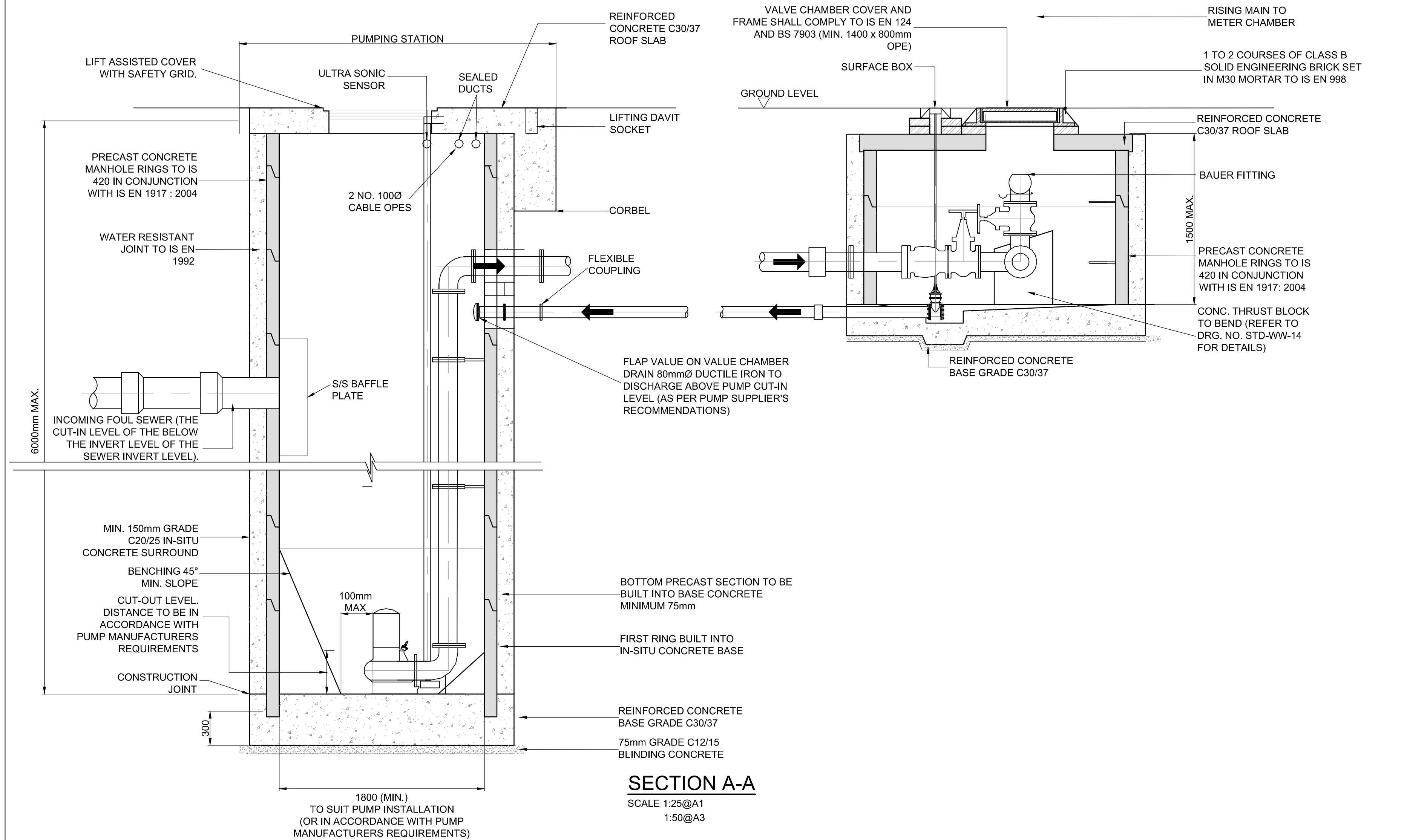
GENERAL NOTE:  
ALL PIPEWORK, MANHOLES, CHAMBERS AND  
ASSOCIATED PIPEWORK TO BE CONSTRUCTED  
TO CURRENT IRISH WATER CODES OF  
PRACTICE AND STANDARD DETAILS

COVERS  
MANHOLE COVERS AND FRAMES TO COMPLY  
WITH THE REQUIREMENTS OF IS/EN 124:1994 &  
BS 7903 COVERS IN SERVICE YARDS TO BE  
APPROVED MINIMUM CLASS E600 WITH 600mm  
CLEAR OPENINGS. ROADWAYS TO BE AN  
APPROVED MINIMUM CLASS D400 WITH 600mm  
CLEAR OPENING. COVERS IN GRASSED AREAS  
AND FOOTPATHS NOT ADJACENT TO  
ROADWAYS TO BE MINIMUM CLASS C250  
WITH 600mm CLEAR OPENING.

MANHOLE STEPS  
MANHOLE STEPS TO COMPLY WITH IS EN  
13101, TYPE D, CLASS 1, GALVANISED MILD  
STEEL & PLASTIC ENCAPSULATED. STEPS ARE  
REQUIRED IN MANHOLES UP  
TO A DEPTH OF 2.5m.

ACCESS LADDERS  
ACCESS LADDERS TO BE MANUFACTURED  
FROM MILD STEEL WITH 65mm x 12mm  
STRINGERS 300mm APART WITH 20mm  
DIAMETER RUNGS AT 300mm *c/c*. MILD STEEL  
STAYS 65mm x 12mm TO BE PROVIDED AT  
INTERVALS NOT EXCEEDING 2.4m. LADDER  
AND STAYS TO BE HEAVILY GALVANISED TO  
BS 729 AFTER MANUFACTURE. THE LADDER IS  
TO BE FIXED WITH 18mm DIAMETER STAINLESS  
STEEL BOLTS. LADDERS ARE REQUIRED FOR  
MANHOLES WITH A DEPTH IN EXCESS OF 2.5m  
AND ARE TO COMPLY WITH IS EN 14396 & WITH BS  
4211.

BENCHING  
1:3 CEMENT:SAND MORTAR WITH STEEL  
TROWEL FINISH AT A 1:30 SLOPE TOWARDS  
THE CHANNEL



INDICATIVE PRE-CAST CONCRETE SUBMERSIBLE LIFTING STATION AND PRECAST VALVE CHAMBER

SCALE 1:25 @A1  
1:50@A3

**NOTES:**  
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm)  
UNLESS NOTED OTHERWISE.

2. PUMPS SHALL BE INSTALLED TO IRISH WATER REQUIREMENTS.
3. ALL DUCTILE IRON PIPE WORK AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 598.
4. ALL GATE VALVES TO BE CLOCKWISE CLOSING.

5. WET WELL TO BE IN ACCORDANCE WITH BS EN 12056-3.

6. COVERS TO BE SIZED TO ALLOW ADEQUATE SPACE FOR PUMP REMOVAL MINIMUM 1400 x 800mm.
7. CHAMBER ACCESS COVERS WITH A CLEAR OPENING EXCEEDING 1m SHALL CONFORM TO BS 9124.

8. WALL THICKNESS AND REINFORCEMENT SHALL BE SELECTED BASED ON SITE SPECIFIC DESIGN AND SHALL BE SUBJECT TO APPROVAL OF IRISH WATER.

9. THE PUMPING STATION SHOULD NOT BE LOCATED IN AREAS THAT ARE SUSCEPTIBLE TO FLOODING AT MORE THAN A 1:30 YEAR RECURRENT. THE PUMPING STATION FACILITY SHALL BE DESIGNED FOR INUNDATION. THE FINISHED SLAB LEVEL SHALL BE POSITIONED ABOVE THE 1:100 YEAR FLOOR LEVEL. ALL ELECTRICAL CONTROL EQUIPMENT SHALL BE IP RATED AND POSITIONED ABOVE 1:200 YEARS FLOOD LEVEL.

10. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

11. VENTILATION STACK TO BE PROVIDED IN SENSITIVE AREAS.

12. SURGE EQUIPMENT TO BE PROVIDED IF DEEMED NECESSARY.

13. INDICATIVE LAYOUT RELATES TO SMALL PUMPING STATIONS AS PER TYPE 1, TYPE 2 & TYPE 3 IN THE IRISH WATER CODE OF PRACTICE FOR WASTER INFRASTRUCTURE.

14. PROPRIETARY WATERTIGHT PRE-CAST CONCRETE SYSTEMS IN ACCORDANCE WITH IS EN 1992-3 TIGHTNESS CLASS 2, MAY BE USED SUBJECT TO IW APPROVAL AS AN ALTERNATIVE. DEVELOPER SHALL PROVIDE DETAILS TO IRISH WATER FOR REVIEW. CONCRETE SURROUND, C30/35 CONCRETE TO IS 206, SHALL BE PROVIDED TO ANY JOINTS WITHIN THE PRECAST CONCRETE UNIT

15. HIGH LEVEL ALARM TO BE PROVIDED.
16. ALL PUMPING STATION AND RISING MAIN PIPEWORK TO BE PRESSURE TESTED IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER SUPPLY SECTION 4.11

17. IN-SITU CONCRETE SURROUND TO PCC MANHOLE UNITS TO BE INCREASED IN THICKNESS FOR PUMPING STATIONS >3.0m DEEP TO DESIGNERS REQUIREMENTS. STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.