

WATERMAIN TRENCH BACKFILL

MINIMUM WIDTH OF BENCHING FOR

150mm GRADE C16/20 IN-SITU /

COVER TO BE SET IN

C50/60 MORTAR

1 NO. COURSE MIN/ 3 NO. COURSES MAX OF CLASS B ENGINEERING BRICKS SET IN

150mm GRADE C16/20 IN-SITU

ELASTOMETRIC JOINT SEAL TO EN 681 -

MANHOLE STEPS TO COMPLY WITH IS EN 13101,

PLASTIC ENCAPSULATED. STEPS ARE REQUIRED

IN MANHOLES WITH A GROUND TO PIPE SOFFIT

DEPTH OF LESS THAN 3.0m. MANHOLE LADDERS

ARE REQUIRED FOR MANHOLES WITH A DEPTH IN

1:3 CEMENT:SAND MORTAR WITH

SLOPE TOWARDS THE CHANNEL

SELF CLEANING TOE HOLES TO BE PROVIDED

STAINLESS STEEL CHAIN IN "DOWN" POSITON

75mm GRADE C12/15

BLINDING CONCRETE

WHERE CHANNEL EXCEEDS 600mm WIDE

SECURED TO RESTRAINING HOOK, WHEN

CHAMBER IS OCCUPIED WHERE THE PIPE

DIAMETER IS 450mm OR MORE

STEEL TROWEL FINISH AT A 1:30

EXCESS OF 3.0m & ARE TO COMPLY WITH IS EN

TYPE D, CLASS1, GALVANISED MILD STEEL &

CONCRETE SURROUND

PRECAST CONCRETE MANHOLE RINGS TO IS

420 IN CONJUNCTION WITH IS EN 1917:2004

C50/60 MORTAR

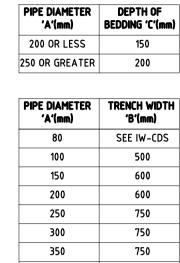
CONCRETE SURROUND

LANDING AREA TO BE 500mm -

FLEXIBLE JOINT

ROCKER PIPE

(SEE TABLE)



# 900 400 900 450

### MINIMUM INTERNAL DIMENSIONS 1 NO. COURSE MIN/ 3 NO. - 600mm DIAMETER OR 600mm X COURSES MAX OF CLASS -B ENGINEERING BRICKS PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED SUBJECT TO REVIEW BY PIPES BUILT INTO CHAMBER WALL OR JOINT FORMED WITH WATERTIGHT SEALS FLOW REFER TO "WASTEWATER TRENCH BACKFILL" DETAIL FOR **BACKFILL AND BEDDING DETAILS** 225mm PRECAST BASE -50mm CROSSFALL OR 225mm IN-SITU -CONCRETE C25/30 SECTION

COVER TO BE SET AS

PER MANUFACTURERS

SPECIFICATION

FLEXIBLE JOINT

ALL PRECAST MANHOLES TO BE

CONSTRUCTED AS PER STD-WW-10 OF

IRISH WATER DOCUMENT IW-CDS-5030-01

DIAMETER OF LARGEST INTERNAL DIAMETER

1350

1500

ROCKER PIPE

1000

1250

PIPE IN MANHOLE (mm) **LESS THAN 375** 

375 TO 450

500 TO 750

PIPE DIAMETER

150 TO 600

600 TO 750

>750

DISTANCE BETWEEN TOP OF

CONSTRUCTION JOINT

CONCRETE MIN 75mm

PIPE & UNDERSIDE OF PRECAST

SECTION TO BE MIN 50mm TO

**BOTTOM PRE-CAST SECTION** 

REINFORCED CONCRETE BASE

INVERT SHOULD BE FORMED WITH CAST

IN-SITU CONCRETE C25/30 20mm AGGREGATE

FINISHED WITH A 1:3 CEMENT SAND MORTAR

TO BE BUILT INTO BASE

ROCKER PIPE

(SEE TABLE)

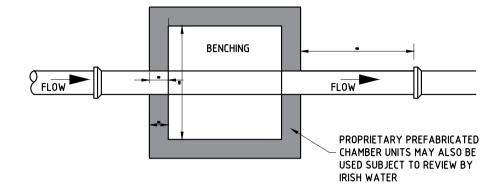
PIPE JOINT WITH CHANNEL TO BE

ackslash LOCATED MINIMUM 100mm INSIDE

MANHOLE COVER AND FRAME SHALL COMPLY

TO EN 124 AND BS 7903 (ALL CLASS D400

COVERS SHALL HAVE MIN FRAME DEPTH 100-150mm) MIN OPE 600mm x 600mm



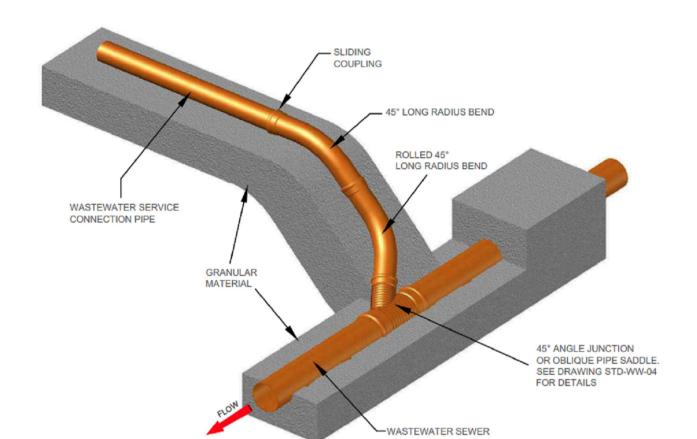
FLOORPLAN

SEALED MANHOLE COVER TO

600mm X 600mm CLEAR OPENING

– SUIT IS EN 124 LOADING MIN

**INSPECTION CHAMBER (PRECAST** CONCRETE CONSTRUCTION)



3D VIEW SHOWING SERVICE CONNECTION PIPEWORK

BEDDING 'C'(mm)

200

TRENCH WIDTH

'B'(mm)

500

600

600

750

750

750

900

900

#### WASTE WATER INFRASTRUCTURE

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH IRISH WATER DOCUMENTS IW-CDS-5030-01 (STANDARD DETAILS) & IW-CDS-5030-03 (CODE OF PRACTICE).

INDIVIDUAL WASTEWATER CONNECTION TO EACH DWELLING WILL BE AS PER STANDARD DETAIL DRAWING STD-WW-02.

REFER TO SECTION 3.2 FOR SERVICE CONNECTION GRADIENTS.

THE INSPECTION CHAMBER WILL BE IN COMPLIANCE WITH STD-WW-03 AND STD-WW-13 AND WILL BE LOCATED WITHIN 1M OF EACH SITE BOUNDARY.

PIPE MATERIALS SHALL COMPLY WITH SECTION 3.13. OF THE IRISH WATER CODE OF PRACTICE.

PIPE MATERIALS WILL BE UNPLASTICISED PVC FOR THE MAIN SEWERS AS PER SECTION 3.13.3 OF THE IRISH WATER CODE OF PRACTICE.

COMPLIANCE WITH STANDARD DETAILS DRAWINGS STD-WW-5, STD-WW-6 & STD-WW-6A SHALL BE ADHERED TO REGARDING SEPARATION DISTANCES FROM OTHER SERVICES, BOUNDARY WALLS & TREES.

MANHOLES WILL CONFORM TO STANDARD DETAILS STD-WW-09, STD-WW-10, STD-WW-11 AND/OR STD-WW-12 AS APPROPRIATE.

SEPARATION DISTANCES FROM FOUL SEWERS TO STRUCTURES AND OTHER UTILITIES WILL COMPLY WITH SECTION 3.5 OF THE IRISH WATER CODE OF PRACTICE.

REFER TO STD-W-12A, STD-WW-06, STD-WW-06A & 3.26 OF THE IRISH WATER CODE OF PRACTICE FOR PLANTING RESTRICTIONS OF WATER AND WASTE WATER. ROOT PROTECTION TO BE REROOT 2000 OR SIMILAR.

REFER TO DETAILSTD-W-11 FOR TYPICAL SERVICES LAYOUT DISTANCES & STD-WW-05 FOR WASTEWATER TYPICAL SERVICES LAYOUT AND 3.21 IRISH WATER WASTEWATER CODE OF

REFER TO SECTION 3.5.16 OF THE WASTE WATER IRISH WATER CODE OF PRACTICE FOR UNAVOIDABLE SERVICES CROSSOVER.

MANHOLE COVERS LOCATED IN GRASS AREAS TO HAVE 200mm ALL ROUND CONCRETE PLINTH AND 100mm DEEP FORMED C架 CONCRETE, 20mm AGGREGATE, BEDDED IN CLAUSE 804

REFER TO 3.5.13 OF THE IRISH WATER CODE OF PRACTICE FOR STAGGERED MANHOLE SYSTEMS DETAILS.

EXTERNAL FACE OF PROPOSED MANHOLE CHAMBER TO BE A MINIMUM OF 0.5m FROM KERB LINE AND EXTERNAL FACE OF SEWERS ARE A MINIMUM OF 1M FROM KERB LINE. SEE SECTION 3.5.15 OF IRISH WATER WASTEWATER CODE OF PRACTICE

CONFIRMATION BY A CHARTERED ENGINEER AND TEST RESULT CERTIFICATES INDICATING THAT THE WASTEWATER INFRASTRUCTURE HAS UNDERGONE APPROPRIATE ON-SITE TESTING AND COMMISSIONING. THE APPROPRIATE SITE TESTS FOE WASTEWATER COLLECTION INFRASTRUCTURE WOULD BE AS FOLLOWS:

- AIR TESTS AND WATER TESTS COMPLETION RESULTS FOR SEWERS WATER RETAINING TESTS COMPLETION RESULTS FOR MANHOLES AND PUMPING
- STATION STRUCTURES PRESSURE TESTING COMPLETION RESULTS OF RISING MAINS COMPLETE WITH A HARD COPY PRINT OUT FROM THE LOGGER OF THE RELAXATION CURVE AS PROOF OF THE
- OUTCOME OF THE TEST. (IGN 4-01-03 COMPLIANT REPORT) A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT (HDPE
- PUMPING STATIONS TESTING & COMMISSIONING REPORTS

#### WASTEWATER INFRASTRUCTURE - CCTV & MANHOLE SURVEY REPORTS

REPORTING AND DELIVERING - THE FINAL REPORTS AND DELIVERABLES TO IRISH WATER SHALL INCLUDE THE FOLLOWING ITEMS: A- CCTV SURVEY FOOTAGE: FILES IN "XML" FORMAT SUBMITTED TO IRISH IN ACCORDANCE WITH MSCC, 5TH ADDITION, COMPATIBLE WITH INFONET.

B - CCTV REPORTS: REPORTS SUBMITTED IDENTIFYING THAT NO DEFECTS EXIST. REPORTS SUBMITTED IN CD OR DVD FORMAT WITH A HARD COPY OF THE SURVEY REPORT. C - MANHOLE SURVEY REPORTS: REPORTS SUBMITTED IDENTIFYING THAT NO DEFECTS EXIST. REPORTS SUBMITTED IN "CSC" FORMAT ON CD OR DVD WITH A HARD COPY OF THE SURVEY REPORTS. MANHOLE REFERENCING SHALL BE CONSISTENT WITH THE AS CONSTRUCTED DRAWINGS \_\_ TO IRISH NATIONAL GRID COORDINATES (ING)) TO +/- 100mm ACCURACY IN THE HORIZONTAL PLANE, WITH DIMENSIONS RELATING TO FIXED ORDNANCE SURVEY CO-ORDINATES.

D - CERTIFICATION FROM THE CUSTOMERS CONSULTANT ENGINEER: CONFIRMATION THAT A QUALITY CONTROL REGIME HAS BEEN IMPLEMENTED WITH THE RESULT THAT NO DEFECTS EXIST IN EITHER THE SEWERS OR THE MANHOLES.

## NOTES

## WATER INFRASTRUCTURE

STANDARD DETAILS.

STD-W-30.

LL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH IRISH WATER DOCUMENTS W-CDS-5020-01 (STANDARD DETAILS) & IW-CDS-5020-03 (CODE OF PRACTICE).

WATER BOUNDARY BOXES TO BE IN COMPLIANCE WITH THE IW CODE OF PRACTICE AND

## PIPE MATERIALS SHALL BE IN COMPLIANCE WITH SECTION 3.9 OF THE CODE OF PRACTICE.

COMPLIANCE WITH STANDARD DETAILS DRAWINGS STD-W-11, STD-W-12 & STD-W-12A BOUNDARY WALLS & TREES.

SHALL BE ADHERED TO REGARDING SEPARATION DISTANCES FROM OTHER SERVICES

BYPASS FLOW METER TO BE CONSTRUCTED AS PER IRISH WATER STANDARD DETAIL

SCOUR CHAMBER TO BE CONSTRUCTED AS PER IRISH WATER STANDARD DETAIL DRAWING

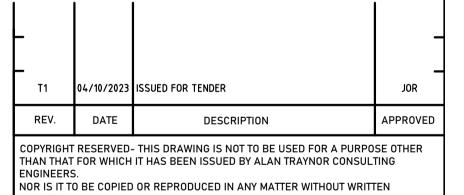
DRAWING STD-W-26F. CONFIRMATION BY A CHARTERED ENGINEER AND TEST RESULT CERTIFICATES & REPORTS

- INDICATING THAT THE WATER INFRASTRUCTURE HAS UNDERGONE APPROPRIATE ON-SIT TESTING, OFF SITE TESTING AND COMMISSIONING. THE APPROPRIATE SITE TESTS FOE
- WATER COLLECTION INFRASTRUCTURE WOULD BE AS FOLLOWS: IGN TEST REPORTS – WATERMAIN PRESSURE TESTING
- SERVICE CONNECTION TEST RESULTS
- ELECTRO/BUTT FUSION WELD TEST RESULT REPORTS ( DESTRUCTIVE TESTING) PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH ELECTROFUSION &
- BUTT FUSION JOINT TESTING COMPLETION RESULTS FOR BOOSTER PUMP PLANT ( IF APPROPRIATE)
- SWABBING & FLUSHNG RECORDS
- DISINFECTION TEST REPORTS ( ACCREDITED LABORATORY REPORT) WATER QUALITY SAMPLING RESULTS ( ACCREDITED LABORATORY REPORT)

#### AS CONSTRUCTED DRAWINGS:

AS CONSTRUCTED RECORD DRAWINGS (IN HARD COPY AND DIGITAL FORMAT) SHALL SHOW THE LOCATION, LAYOUT PLANS, LONGITUDINAL SECTIONS AND DETAILS OF THE WORKS AND THE DEVELOPMENT IN FULL. PLAN SCALES SHOULD BE IN COMMON USE, ie 1:200, 1:500, 1:1000 OR 1:2500 AS APPROPRIATE. DRAWINGS SHOULD BE PREPARED USING AN ELECTRONIC SYSTEM AND SUBMITTED IN STANDARD "CAD COMPATIBLE (DWG/DXF)" FILE FORMAT. THESE DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:

- LOCATIONS OF ALL VALVES, HYDRANTS, SCOUR VALVES OR WASHOUT HYDRANTS, METERS, DUCTS, TAPPING LOCATIONS, WATER MAIN AND SERVICE PIPES, BOUNDARY
- BOXES, ETC., COMPLETE WITH LEGENDS TO IRISH WATER'S REQUIREMENTS. DETAILED PIPE MATERIAL TYPES, SIZES, CONNECTION DETAILED PLANS OF PIPE
- BRANCHES, SHOWING VALVE LOCATIONS, ETC. LOCATIONS OF ASSETS ARE TO BE TO +/- 100MM ACCURACY IN THE HORIZONTAL PLANE
- TO THE CENTRE OF THE ASSET, WITH DIMENSIONS RELATING TO FIXED IRISH NATIONAL
- GRID (ING) CO-ORDINATES. COVER LEVEL FOR WATER MAIN FITTINGS AND INTERMITTENT WATER MAIN INVERT
- LEVELS RELATING TO FIXED ORDNANCE SURVEY DATUM (MALIN HEAD) TO A LONGITUDINAL SECTIONS, TO AN EXAGGERATED VERTICAL SCALE, (SUCH AS 1:1000)
- HORIZONTAL AND 1:100 VERTICAL) SHOWING INSTALLED LEVELS, COMPLETED GROUND LEVELS, INVERT LEVELS, PIPE SIZES, BEDDING, HAUNCH AND SURROUND DETAILS BACKFILL DETAILS, TOGETHER WITH CHAMBER LOCATIONS, CHAINAGES, GRADIENTS PIPE MATERIALS, ETC. ALL CHAMBERS FOR WATER SUPPLY FITTINGS SHALL B IDENTIFIED AND PROVIDED WITH LOCATION CO-ORDINATES TO IRISH NATIONAL GRID (ING)
- DETAILS OF ANY SERVICES AND STRUCTURES ON THE SITE, ESPECIALLY THOSE II CLOSE PROXIMITY TO THE WORKS INCLUDING OFFSET MEASUREMENT TO THE WATER SUPPLY SYSTEM.
- DWELLING AND BUILDING NUMBERS.
- CONSTRUCTION DETAILS OF PUMP STATION AS WELL AS MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT DETAILS.
- DETAILS OF SERVICES AND STRUCTURES ON THE SITE, EXISTING AND PROPOSED ESPECIALLY THOSE IN CLOSE PROXIMITY TO THE WORKS INCLUDING OFFSETS MEASUREMENTS TO THE WORKS.





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PROJECT TITLE

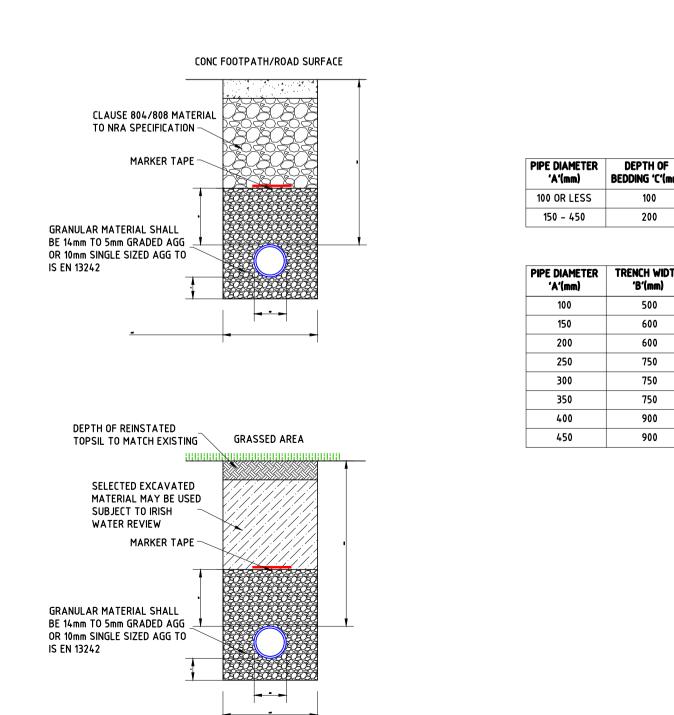
PROPOSED RESIDENTIAL DEVELOPMENT AT BARRACK LANE, KILNALECK, CO. CAVAN

DRAWING TITLE

GENERAL CONSTRUCTION DETAILS

| SCALE<br>1:200 | DRAWN<br>JOHN O'REILLY | CHECKED<br>LIAM McELGUNN | APPROVED<br>ALAN TRAYNOR |
|----------------|------------------------|--------------------------|--------------------------|
|                | DATE<br>JUNE 2023      | DATE<br>JUNE 2023        | DATE<br>JUNE 2023        |

DRAWING No. 23-104-101



CLASS B ENGINEERING BRICKS ( 2 NO.COURSES MIN, 4 COURSES MAX) SET IN CLASS 1 MORTAR PRECAST CONCRERT SLAB 1278mm DIA WITH 750 X 750mm OPENING GAP BETWEEN SLAB AND RESTRICTOR CAP TO BE FOAM FILLED RESTRICTOR CAP WITH 350mm OPENING AND SEALING RING 60NE930 600mm DIA SHAFT-60NE003 MAX DEPTH FROM COVER LEVEL TO INVERT LEVEL IS TO BE NO GREATER THAN 1m TYPE 1 COMPACTED RANGE 600 BASE

DI COVER & FRAME

BSEN 124 B125 OR D400

600mm CHAMBER B125/D400 LOADING

**SECTION A-A** PRE-CAST CONCRETE MANHOLE

WASTE/SURFACE WATER SEWER TRENCH BACKFILL