

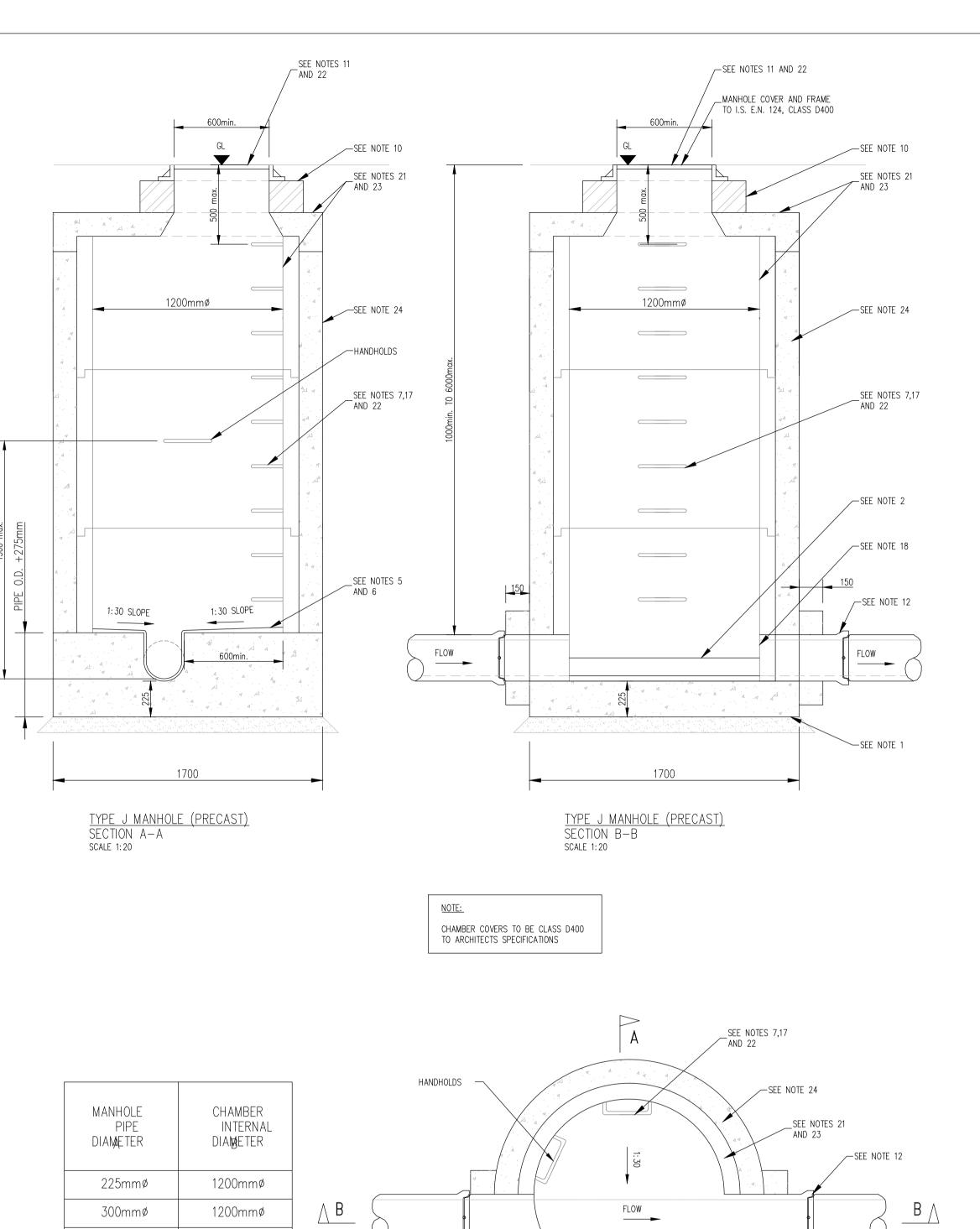
ALL LEVELS GIVEN ARE

RELATIVE TO ORDNANCE DATUM.

THIS DRAWING HAS BEEN ISSUED FOR INFORMATION

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SURFACE WATER MANHOLES TO DUN LAOGHAIRE COUNTY COUNCIL SPECIFICATIONS SCALE : 1/20

SCALE 1:20

TYPE J MANHOLE (PRECAST)

SEE NOTES 5

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1200mmø

1200mmø

1200mmø

1200mmø

1350mmø

1350mmø

1500mmø

2100mmø

2100mmø

Proposed Residential Development at Frankfort Castle. Drainage Details Sheet 1 Of 3 H081-CSC-XX-XX-DR-C-0015

JS NB NB AS SHOWN @A1

FEB 2021

1. 225mm THICK CL.20N/20mm MASS CONCRETE FOUNDATIONS.

JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS.

MANHOLE CONSTRUCTION

30N/20mm INSITU CONCRETE.

8. 600mm SQUARE OPE IN ROOF SLAB.

THE INNER FACE OF MANHOLE WALL.

COMPLYING WITH B.S.4942 PART 2 OR EQUIVALENT.

19. POSITION OF 910 SQUARE OPE IN INTERMEDIATE ROOF SLAB.

CODE TAKING GRANULAR FILL PRESSURE AND H.B. SURCHARGE.

REINFORCEMENT TO SLABS TO ENGINEERS DETAILS

SEALED WITH APPROVED PRE-FORMED JOINTING STRIP.

ALL BRICK TO BE SOLID ENGINEERING BRICK CLASS A OR B.

27. LEVELS REFER TO O.S. DATUM MALIN HEAD.

SECTION 6.2.7, B.S.8110: PART 1:1997.

SUPPLIED OVER PIPÉ CROWN.

1917 AND IS 420 2004.

GENERAL NOTES

>3m FOR ACCESS TO INVERT.

B.S.729 OR EQUIVALENT.

INSTRUCTIONS.

. PREFORMED HALF CIRCLE CHANNEL PIPES. THE PIPELINE MAY, WHERE PRACTICABLE, BE LAID

• FOR SURFACE WATER MANHOLE HIGH DENSITY BLOCKS TO CI.S10 OF IS.20 PART 1:1987 OR CI.

BLOCK WORK SHALL BE BEDDED AND JOINTED USING MORTAR TO IS406. BEDS AND VERTICAL

4. RELIEVING ARCH FORMED BY 215x103x65 SOLID ENGINEERING BRICK CLASS A OR B AS PER

6. BENCHING FINISHED IN 2:1 SAND-CEMENT MORTAR WITH A SMOOTH TROWEL FINISH, AT 1:13

7. STANDARD RUNGS AT 300 CENTRES VERTICALLY AND GALVANISED TO THE LATEST VERSION OF

9. PRECAST R.C. ROOF SLAB SHALL BE 200mm THICK IN CLASS 30N/20mm, WITH 40mm COVER

10. 1 TO 2 COURSES OF SOLID ENGINEERING BRICKS CI.B TO I.S.91:1983 SET IN 1:3 (CEMENT AND

11. CLASS D400 OR E600 MANHOLE COVER AND FRAME TO IS/EN 124. 150mm DEEP FRAME FOR

ROADS AND 100mm DEEP FOR FOOTPATHS AND GREEN AREAS. NON-ROCK DESIGN, CLOSED

APPROVED MATERIAL, COVER TO HAVE A MINIMUM MASS OF 140KG/m², FRAME BEARING AREA

SHALL BE 80,000mm2 MIN., FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO

12. SHORT LENGTH PIPE AND PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM

PROVIDED IN BENCHING OF SEWERS GREATER THAN 525mm DIAMETER AND DEPTH TO INVERT

SAFETY CHAIN SHALL BE 10mm NOMINAL SIZE GRADE M(H) NON-CALIBRATED CHAIN, TYPE 1,

14. A SAFETY CHAIN IS TO BE PROVIDED ON PIPES THAT EXCEED 450mm IN DIAMETER. MILD STEEL

INSTEAD OF RUNGS TO B.S.4211 OR EQUIVALENT EXCEPT THAT STRINGERS SHOULD BE NOT

LESS THAN 65x12mm IN SECTION AND RUNGS 25mm IN DIAMETER. FIXED LADDERS SHOULD

INTERVALS OF NOT MORE THAN 2.0m, STRINGERS SHOULD BE BOLTED TO CLEATS TO FACILITATE

15. WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.0m LADDERS SHALL BE USED

16. LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT

ALL MANHOLES SHALL BE WATER TIGHT TO THE SATISFACTION OF THE ENGINEER.

17. ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC. SHALL BE HOT DIP GALVANISED TO

18. PIPE SHOULD BE CUT FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE WALL SO THAT THE

• FORMWORK TO REINFORCED CONCRETE AND MASS CONCRETE SHALL COMPLY WITH CLASS 2,

• FINISH TO THE TOP OF SLABS SHALL COMPLY WITH TYPE A, SECTION 6.2.7, B.S.8110: PART

PLAN DIMENSIONS OF MANHOLE ARE BASED ON BLOCK WORK HAVING A COORDINATING SIZE OF

MANHOLES ARE DESIGNED TO B.S.8005 AND WALL THICKNESS TO LS.325 BLOCK WORK DESIGN

20. FOR MANHOLES >3m DEPTH TO INVERT USE 30N/20mm INSITU CONCRETE. REINFORCING MESH

21. FOR PRECAST MANHOLES, CHAMBER WALLS AND COVER SLAB TO BE CONSTRUCTED TO IS EN

22. MANHOLE OPENINGS TO BE SITUATED FURTHEST FROM THE NEAREST CARRIAGEWAY. MANHOLE

24. PRECAST MANHOLES TO BE SURROUNDED WITH A MINIMUM OF 150mm THICK GRADE C20/40

26. DO NOT SCALE FROM THIS DRAWING USE STATED DIMENSIONS ONLY. IF IN DOUBT CONSULT THE

FOR PIPE DIAMETER >750mm USE MANHOLE WITH INTERNAL SIZE=PIPE SIZE + 1mETRE + 300mm.

DISTANCE FROM THE TOP RUNG OF THE LADDER TO GROUND LEVEL MUST BE A MAXIMUM OF

23. FOR BEDDING AND SEALING OF CHAMBER RINGS, THE TOP RING (TO PRECAST COVER SLAB AND

BOTTOM RING TO BE BEDDED WITH CEMENT MORTAR. FOR INTERMEDIATE RINGS, JOINTS TO BE

STEPS/ACCESS TO BE POSITIONED TO ALLOW VIEWING OF ONCOMING TRAFFIC.

25. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.

REF. A393@ 6.16KG/m TO BE FIXED AT MID POINT OF WALL. ADDITIONAL REINFORCEMENT TO BE

CHANNEL EXTENDS THE FULL LENGTH OF THE MANHOLE (EXCEPT FOR PRECAST MANHOLES).

MEET THE DIMENSIONAL REQUIREMENTS OF B.S.4211 OR EQUIVALENT.

KEYWAYS, MANUFACTURED FROM SPHEROIDAL GRAPHITE CAST IRON (DUCTILE CAST IRON),

600x600 (600mmø) CLEAR OPENING, COVER AND FRAME COATED IN BITUMEN OR OTHER

MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURERS

13. TOE HOLES OF 230mm MINIMUM DEPTH AND GALVANISED STEEL SAFETY RAILINGS TO BE

DRAWING. RELIEVING ARCHES USED IN BRICK OR BLOCK WORK MANHOLES EXTEND OVER FULL

THICKNESS OF WALL. A DOUBLE ARCH IS TO BE FORMED FOR PIPE DIAMETERS GREATER THAN

JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID.

BRICK TO BE BONDED TO BLOCK WORK USING ENGLISH GARDEN WALL BOND.

5. BENCHING AND PIPE CHANNEL PIPE SURROUND-CI.20/20 CONCRETE.

B.S.729 OR EQUIVALENT. NOTE: STEP IRONS ARE NOT ACCEPTABLE.

THROUGH THE MANHOLE AND THE CROWN CUT OUT TO HALF DIAMETER, PROVIDED FLEXIBLE

JOINTS ARE SITUATED ON EACH SIDE NO FURTHER THAN 600mm FROM THE INNER FACE OF

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