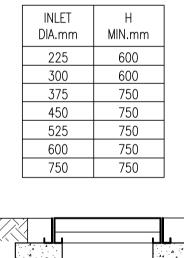
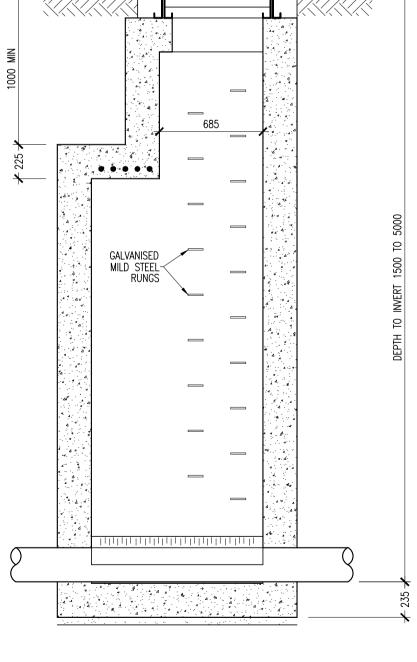


BACKDROP MANHOLE



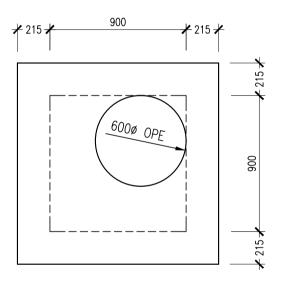


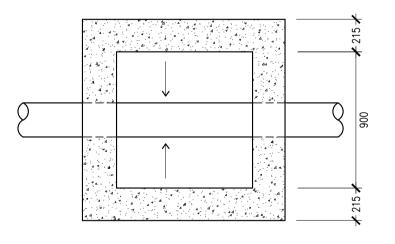
<u>DEEP MANHOLE</u>

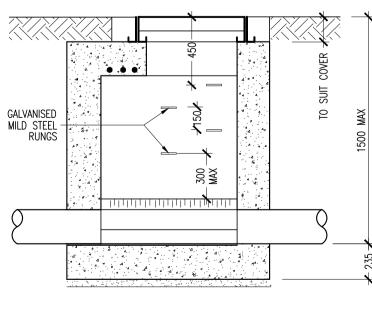
<u>PRIVATE DRAINAGE</u>

[ALTERNATIVE IN-SITU REINFORCED CONCRETE MANHOLE DETAILS] (STRUCTURAL ENGINEER TO PROVIDE CONSTRUCTION DETAILS)

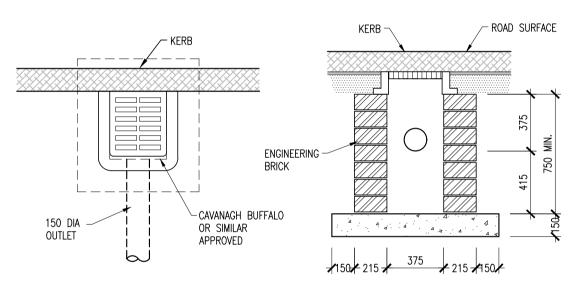




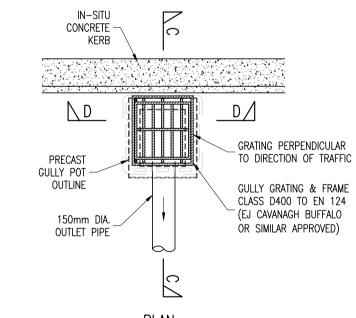


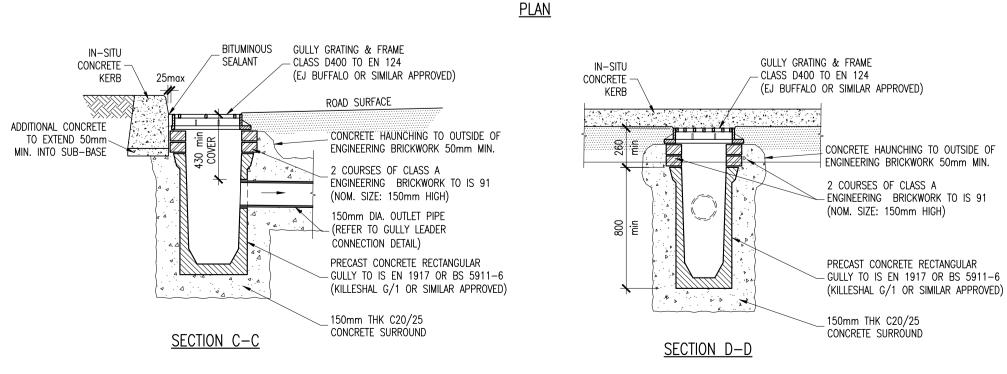


SHALLOW MANHOLE



PLAN





RECTANGULAR PRECAST ROAD GULLY DETAIL



IN-SITU ROAD GULLY DETAILS

© COPYRIGHT OF THIS DRAWING IS RESERVED BY DBFL CONSULTING ENGINEERS. NO PART SHALL BE REPRODUCED OR TRANSMITTED WITHOUT THEIR WRITTEN PERMISSION. NO CHANGES OF WHATSOEVER NATURE ARE TO BE MADE TO ANY DETAILS SET OUT OR CONTAINED IN ANY DBFL SPECIFICATIONS OR DRAWINGS UNLESS THE EXPRESS CONSENT HAS BEEN OBTAINED IN ADVANCE, IN WRITING, FROM DBFL. NOTES: 1. RIGID PIPES SHALL MEAN CAST OR SPUN IRON, CONCRETE OR CLAY. 2. FLEXIBLE PIPES SHALL MEAN PIPES OF STEEL, PVC, OTHER PLASTIC OR DUCTILE IRON. 3. CONCRETE C20/25 TO HAVE COVER = 50mm MIN. WITH A MINIMUM CEMENT CONTENT OF 260 kg/m³, MAXIMUM W/C RATIO OF 0.65 AND SLUMP CLASS S2. 4. C25/30 CONCRETE TO HAVE A MINIMUM CEMENT CONTENT OF 280Kg/m³, MAXIMUM WATER/CEMENT RATIO OF 0.65 AND SLUMP CLASS S2. 5. FOR DETAILS OF TRENCH REINSTATEMENT TO PIPES IN THE VICINITY OF BUILDINGS, WALLS & FOUNDATION. REFER TO STRUCTURAL DRAWINGS. 6. ALL PIPES WITH LESS THAN 1.2m COVER UNDER GRASSED AREAS AND FOOTPATHS TO BE SURROUNDED IN 150mm MINIMUM OF C20/25 CONCRETE. LEAN-MIX BACKFILL TO TRENCHES IN EXISTING ROADS, WHERE REQUIRED BY THE LOCAL AUTHORITY TO BE GRADE C20/25 CONCRETE. 8. TRENCH DETAILS ARE REFERENCED FROM; GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS. • TII ROAD CONSTRUCTION DETAILS DOE RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS BUILDING REGULATIONS 9. WHERE ROCKS OR OTHER HARD TRENCH BOTTOM IS ENCOUNTERED, THE FIGURE DENOTED BY * IS TO BE DOUBLED. 10. GRANULAR BACKFILL MATERIAL SHALL BE IN COMPLIANCE WITH CLAUSE 808 (GRANULAR MATERIAL TYPE B) OF THE TII SPECIFICATION FOR ROAD WORKS. GRANULAR BACKFILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS MINIMUM OF 300mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT LAYERS OF GRANULAR FILL TO BE WELL COMPACTED IN 150mm THICK LAYERS TO THE LOCAL AUTHORITY ROAD DIVISION SPECIFICATION. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE. 11. SELECTED FILL SHOULD BE FREE FROM STONES LARGER THAN 37mm, LUMPS OF CLAY OVER 75mm, TIMBER, FROZEN MATERIAL AND VEGETABLE OR FOREIGN MATTER. SELECTED FILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS A MINIMUM OF 150mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT SELECTED FILL CAN BE PLACED AND COMPACTED IN 150mm THICK LAYERS. 12. GENERAL BACKFILL MATERIAL SUITABLE FOR BACKFILL ABOVE SELECTED FILL MATERIAL SHOULD BE FREE FROM BOULDERS, LUMPS OF CONCRETE, TIMBER AND VEGETABLE OR FOREIGN / CONTAMINATED MATTER. GENERAL BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER BEING WELL COMPACTED. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE. 13. TRENCH ABOVE PIPES WITH LESS THAN 750mm COVER TO BE BACKFILLED WITH C20/25 CONCRETE TO FORMATION LEVEL. 14. SURFACING TO BE IN ACCORDANCE WITH THE ROAD SPECIFICATION AND, IF APPROPRIATE, LOCAL AUTHORITY REQUIREMENTS. 15. WHERE CLASS 6F1 / 6F2 CAPPING MATERIAL IS PROPOSED WITHIN 500mm OF CONCRETE OR STEEL, CLASS 6N IS TO BE USED INSTEAD. NOTE: ALL WORKS & SPECIFICATIONS TO BE UNDERTAKEN IN ACCORDANCE WITH TII SPECIFICATION FOR ROADWORKS GREATER DUBLIN CODE OF PRACTICE FOR DRAINAGE WORKS RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS P02 21/03/22 ISSUED FOR PLANNING RSP LMcL P01 29/09/20 ISSUED FOR PRE-PLANNING APW BJM description by chkd. rev date A - Approved B - Approved with comments client approval C - Do not use suitability issue purpose PLANNING S2 - FOR INFORMATION DBFL Consulting Engineers www.dbfl.ie DUBLIN OFFICE: Ormond House, Upper Ormond Quay, Dublin 7. D07 W704 PHONE +353 1 400 4000 CORK OFFICE: 14 South Mall, Cork. T12 CT91 PHONE +353 21 2024538 WATERFORD OFFICE: Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford. X91 W028 PHONE +353 51 309 500

ON ORIGINAL

project ref. RESIDENTIAL DEVELOPMENT AT HACKETTSTOWN, SKERRIES, CO. DUBLIN drawing title

SURFACE WATER STANDARD DETAILS - SHEET 2

LAND DEVELOPMENT AGENCY

designed by	author	scale	sheet size
BJM	APW	AS SHOWN	A1
drawing no.			revision
190170-DBFL-SW-SP-DR-C-5013			P02