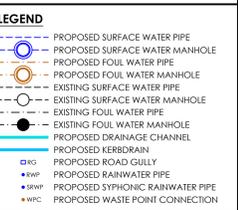


- GENERAL NOTES**
- ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH JPC CONSULTANTS STANDARD SPECIFICATION & ALL RELEVANT BRITISH & EUROPEAN STANDARDS.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, M&E CONSULTANTS AND JPC CONSULTANTS DRAWINGS.
  - ANY DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO COMMENCEMENT OF WORKS.
- DRAINAGE NOTES**
- ALL BUILDING DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN 752:2008 DRAINAGE AND SEWER SYSTEMS OUTSIDE BUILDINGS, THE CURRENT BUILDING REGULATIONS AND THE LOCAL AUTHORITY BUILDING CONTROL SPECIFICATIONS AND REQUIREMENTS.
  - ANY DRAINAGE TO BE FORWARDED FOR ADOPTION EITHER WITHIN THE SITE OR OUTSIDE SHALL BE CONSTRUCTED TO SPECIFICATIONS FOR ADOPTION LATEST EDITION AND ANY SPECIFIC REQUIREMENTS OF THE ADOPTING SEWERAGE WATER AUTHORITY.
  - THE LOCATION, SIZE AND DEPTH OF ALL EXISTING DRAINAGE WORKS AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS ON SITE. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
  - THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY EXISTING LIVE DRAINAGE BE FOUND WITHIN THE SITE SECONDARY SERVING ADJACENT PROPERTIES.
  - ALL EXISTING DRAINAGE WITHIN THE SITE NOT REQUIRED FOR THE NEW DEVELOPMENT SHALL BE ABANDONED. DRAINS AND SEWERS LESS THAN 1.000m DEEP WHICH ARE IN OPEN GROUND SHOULD AS FAR AS IS PRACTICABLE BE FULLY REMOVED. ALL OTHER PIPES SHOULD BE SEALED AT BOTH ENDS AND AT ANY POINT OF CONNECTION AND BE GRADED TO PREVENT RATS CANNOT GAIN ACCESS. LARGER PIPES 2250 OR ABOVE SHOULD BE GROUT FULLED TO PREVENT SUBSIDENCE OR DAMAGE TO BUILDINGS OR SERVICES IN THE EVENT OF COLLAPSE.
  - THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND OVERSEEN WORKS AS NECESSARY TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE UTILITY COMPANIES.
  - THE CONTRACTOR SHALL ALLOW FOR BEARING WITH SURFACE WATER RUN OFF INTO EXCAVATIONS AND FROM GROUNDWATER BY MEANS OF DUMPS, PUMPING AND DE WATERING AS APPROPRIATE IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
  - THE CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS IN LINE WITH CURRENT LEGISLATION WHEN WORKING NEAR COVERTED SERVICES, DEEP EXCAVATIONS AND MACHINERY.
  - THE CONTRACTOR SHALL ALLOW FOR OBTAINING ALL APPROVALS FROM THE RELEVANT AUTHORITIES WHEN WORKING IN THE PUBLIC HIGHWAY AND ON THE SEWERAGE SYSTEM.
  - THE CONTRACTOR SHALL SUFABLY PROTECT PEDESTRIANS AND VEHICLES FROM WORKING AREAS.
  - ALL MANHOLE CHAMBER COVER LEVELS ARE APPROXIMATE AND SHALL BE ADJUSTED ON SITE TO SUIT THE PROPOSED FINISHED LEVELS.
  - ALL PIPES SHALL BE LAD WITH LEVEL SOFFITS AND ALL MANHOLE CHAMBER INVERT LEVELS SHOWN ARE FOR THE OUT GOING PIPE LINE. ON THE DRAWING NOTE THAT ALL PIPE GRADIENTS INDICATED ON THE DRAWING ARE APPROXIMATE ONLY.
  - ALL PIPE CONNECTION FROM DRAINAGE CHANNELS AND GULLIES SHALL BE 1500 PIPES AT A MINIMUM GRADE OF 1:100 WITH CLASS 2 BEDDING UNDO. ON THE DRAWING.
  - ALL PIPE CONNECTIONS FROM RWPS TO BE 1000 AT 1:60 MIN. AND ALL PIPE CONNECTIONS FROM RWPS TO FIRST CHAMBER SHALL BE 1000 AT 1:40 MIN. WITH CLASS 3 BEDDING BENEATH THE BUILDING AND CLASS 2 UNDER EXTERIALS WHERE COVER LESS THAN 1.200m UNDO. ON THE DRAWING LOCATION OF RWPS AND RWCS TO BE CONFIRMED BY THE ARCHITECT AND ARE SHOWN INDICATIVELY ONLY.
  - ALL SYNCHRONIC RWP SYSTEMS TO BE DESIGNED BY OTHERS. PREWORK FROM DOWN PIPE TO FIRST MANHOLE TO BE SIZED/ DESIGNED BY SYNCHRONIC SYSTEM DESIGNER. THE FIRST MANHOLE TO HAVE AN OPEN GRATE COVER SAFT GOVERN WATERWAY 2000 - 2400 OR SIMILAR APPROVED.
  - SUFABLY SIZED PERCOL INTERCEPTORS MUST COMPLY WITH THE REQUIREMENTS OUTLINE IN PFD03 THESE INCLUDE Silt STORAGE CAPACITY AND HIGH LEVEL HYDROCARBON ALARM W/RED BACK TO A MANNED OFFICE.
  - UPON COMPLETION OF THE DRAINAGE WORKS THE CONTRACTOR SHALL CLEAN ALL DRAIN RIGS BY JETTING AND REMOVE ALL DEBRIS FROM SITE. NO DEBRIS SHALL BE PERMITTED TO ENTER THE PUBLIC SEWER AND/OR WATERCOURSE SYSTEM. ONCE THE DRAINAGE SYSTEM HAS BEEN FULLY CLEANED OUT A CCTV CAMERA CONDITION SURVEY SHALL BE UNDERTAKEN TO ALL CONSTRUCTED DRAINAGE AND SEWER PIPES WITH THE FOOTAGE ISSUED TO THE ENGINEER FOR VIEW. THE AS BUILT INVERT AND COVER LEVELS SHALL BE RECORDED BY THE CONTRACTOR AND PASSED ON TO THE ENGINEER FOR REVIEW.



**PROPOSED FINISHED LEVELS FOR THE COMMERCIAL ZONE ARE TO BE CONFIRMED AS PART OF THE ON GOING PLOT DESIGN DEVELOPMENT EXERCISE AND WILL BE TAILORED TO SUIT THE AGREE PLOT LAYOUTS**

**LEVELS AND DETAILS OF THE EXISTING LAND DRAINAGE AND WATERCOURSE NETWORK ARE BASED ON THE TOPOGRAPHICAL SURVEY OF THE SITE.**

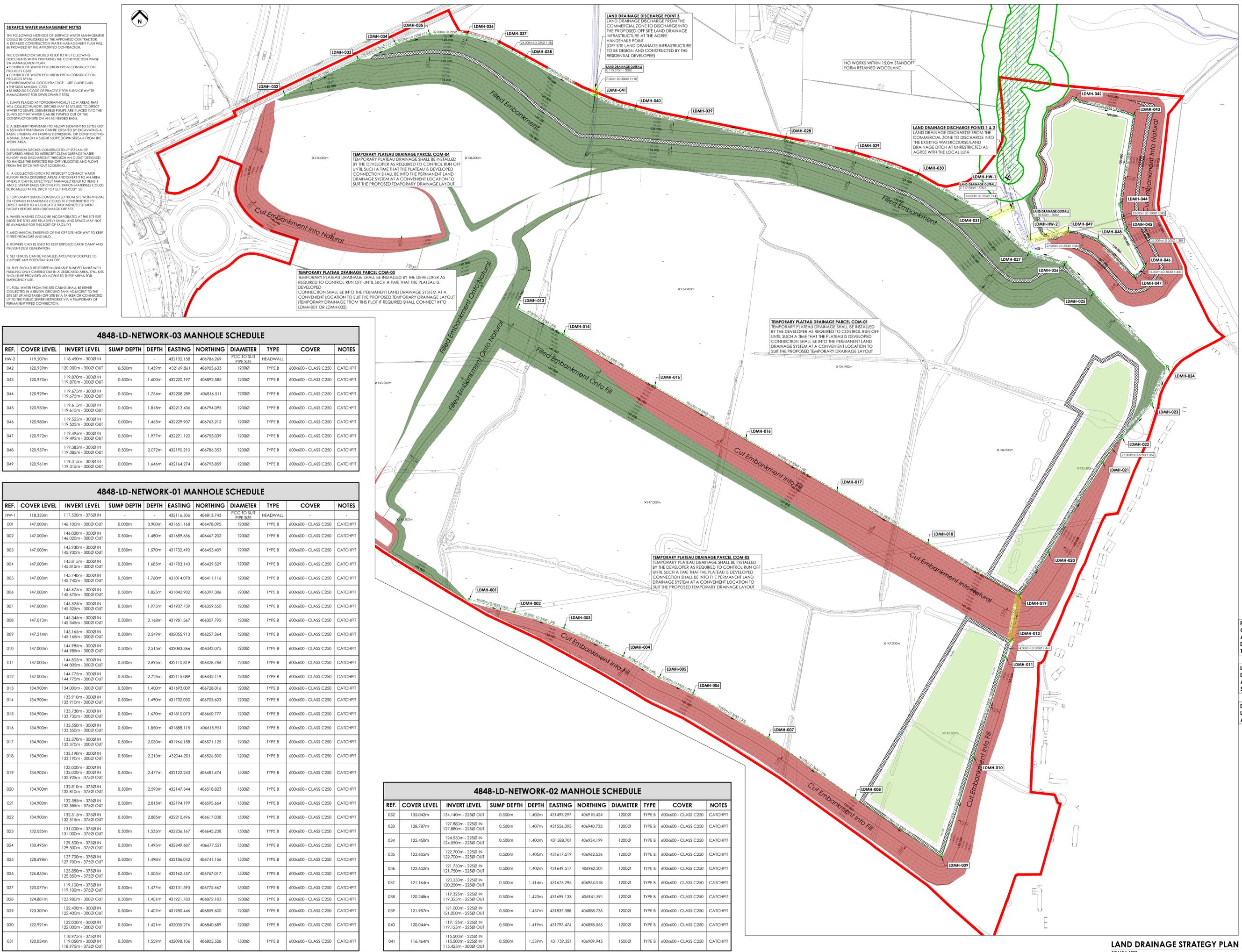
**DETAILED DESIGN OF ANY OFF SITE LAND DRAINAGE INFRASTRUCTURE ALL BY THE RESIDENTIAL DEVELOPER**

REV	DESCRIPTION	DATE	CHK	BY
P02	UPDATED WITH NEW DESIGN TEAM PLANNING COMMENT	05/10/23	CPH	JDM
P01	INITIAL ISSUE	13/07/23	CPH	JDM

Project: **BARNSELY WEST**

Drawing Title: **LAND DRAINAGE STRATEGY PLAN COMMERCIAL DEVELOPMENT ZONE**

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4848-JPG-ZZ-ZZ-DR-D-1454 S4 P02



**SURFACE WATER MANAGEMENT NOTES**

THE FOLLOWING METHODS OF SURFACE WATER MANAGEMENT COULD BE CONSIDERED BY THE APPOINTED CONTRACTOR. A DETAILED CONSTRUCTION WATER MANAGEMENT PLAN WILL BE PROVIDED BY THE APPOINTED CONTRACTOR.

THE CONTRACTOR SHOULD REFER TO THE FOLLOWING DOCUMENTS WHEN PREPARING THE CONSTRUCTION PHASE SW MANAGEMENT PLAN:

- CONTROL OF WATER POLLUTION FROM CONSTRUCTION PROJECTS C252
- CONTROL OF WATER POLLUTION FROM CONSTRUCTION PROJECTS SP154
- ENVIRONMENTAL GOOD PRACTICE - SITE GUIDE C450
- ENVIRONMENTAL MANUAL C733
- BS 8002:2013 CODE OF PRACTICE FOR SURFACE WATER MANAGEMENT FOR DEVELOPMENT SITES

- SUMPS PLACED AT TOPOGRAPHICALLY LOW AREAS THAT WILL COLLECT RUNOFF. DITCHES MAY BE PLACED TO DIRECT WATER TO SUMPS. SUBMERSIBLE PUMPS ARE PLACED INTO THE SUMPS SO THAT WATER CAN BE FURNISHED OUT OF THE CONSTRUCTION SITE ON AN AS NEEDED BASIS.
- A SEDIMENT TRAP BASIN TO ALLOW SEDIMENT TO SETTLE OUT A SEDIMENT TRAP BASIN CAN BE CREATED BY EXCAVATING A TRENCH INTO AN EXISTING DEPRESSION, OR CONSTRUCTING A SMALL DAM ON A SLIGHT SLOPE DOWN STREAM FROM THE WORKING AREA.
- DIVERSION DITCHES CONSTRUCTED UP STREAM OF DISTURBED AREAS TO INTERCEPT CLEAN SURFACE WATER RUNOFF AND DISCHARGE THROUGH AN OUTLET DESIGNED TO HANDLE THE EXPECTED RUNOFF VOLUMES AND FLOWS FROM THE DITCH WITHOUT SCOURING.
- A COLLECTION DITCH TO INTERCEPT CONTACT WATER RUNOFF FROM DISTURBED AREAS AND DIVERT IT TO AN AREA WHERE IT CAN BE EFFECTIVELY MANAGED REFER TO ITEMS 10 & 11. STREAM BARRIERS OR OTHER FLEXIBLE MATERIALS SHOULD BE INSTALLED IN THE DITCH TO HELP INTERCEPT SILT.
- TEMPORARY BUNDING CONSTRUCTED FROM SITE WORN MATERIALS FROM DISTURBED AREAS SHOULD BE CONSTRUCTED TO DIRECT WATER TO A DEDICATED TREATMENT/SETTLEMENT FACILITY BEFORE BEING DISCHARGED OFF SITE.
- WHERE WADEABLE COULDS BE INCORPORATED AT THE SITE BUT (NOTE THE SITES ARE RELATIVELY SMALL AND SPACE MAY NOT BE AVAILABLE FOR THIS SORT OF FACILITY)
- MERCANTIAL SWEEPING OF THE OFF SITE HIGHWAY TO KEEP IT FREE FROM DIRT AND MUD.
- BOWERS CAN BE USED TO KEEP EXPOSED EARTH DAMP AND PREVENT DUST GENERATION.
- SILT FENCES CAN BE INSTALLED AROUND STOCKPILES TO CAPTURE ANY POTENTIAL RUN OFF.
- FUEL SHOULD BE STORED IN SUITABLE BUNDING TANKS WITH FILLING ONLY CARRIED OUT IN A DEDICATED AREA. SPILLS SHOULD BE PROVIDED ADJACENT TO THESE AREAS FOR EMERGENCY USE.
- FOUL WATER FROM THE SITE CABINS SHALL BE EITHER COLLECTED IN A BELOW GROUND TANK ADJACENT TO THE SET UP AND TAKEN OFF SITE BY A TANKER OR CONNECTED UP TO THE PUBLIC SEWER NETWORKS VIA A TEMPORARY PERMANENT PIPED CONNECTION.

**4848-LD-NETWORK-03 MANHOLE SCHEDULE**

REF.	COVER LEVEL	INVERT LEVEL	SUMP DEPTH	DEPTH	EASTING	NORTHING	DIAMETER	TYPE	COVER	NOTES
HW-2	119.207m	118.450m - 3000 IN	-	-	432132.158	406786.269	RCC TO SUIT PIPE SITE	HEADWALL	-	-
042	120.939m	120.000m - 3000 OUT	0.500m	1.439m	432169.861	406905.633	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
043	120.970m	119.870m - 3000 IN 119.870m - 3000 OUT	0.500m	1.600m	432220.197	406892.585	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
044	120.929m	119.675m - 3000 IN 119.675m - 3000 OUT	0.500m	1.754m	432208.289	406816.511	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
045	120.933m	119.615m - 3000 IN 119.615m - 3000 OUT	0.500m	1.818m	432213.436	406794.095	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
046	120.980m	119.525m - 3000 IN 119.525m - 3000 OUT	0.000m	1.455m	432229.907	406763.212	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
047	120.972m	119.495m - 3000 IN 119.495m - 3000 OUT	0.500m	1.977m	432221.120	406755.039	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
048	120.957m	119.385m - 3000 IN 119.385m - 3000 OUT	0.500m	2.072m	432190.210	406784.353	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
049	120.961m	119.315m - 3000 IN 119.315m - 3000 OUT	0.000m	1.646m	432164.274	406793.859	12000	TYPE B	600x600 - CLASS C250	CATCHPIT

**4848-LD-NETWORK-01 MANHOLE SCHEDULE**

REF.	COVER LEVEL	INVERT LEVEL	SUMP DEPTH	DEPTH	EASTING	NORTHING	DIAMETER	TYPE	COVER	NOTES
HW-1	118.333m	117.500m - 3750 IN	-	-	432116.506	406813.743	RCC TO SUIT PIPE SITE	HEADWALL	-	-
001	147.000m	146.100m - 3000 OUT	0.000m	0.900m	431651.168	406478.095	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
002	147.000m	146.020m - 3000 IN 146.020m - 3000 OUT	0.500m	1.480m	431689.656	406467.202	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
003	147.000m	145.930m - 3000 IN 145.930m - 3000 OUT	0.500m	1.570m	431732.490	406453.409	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
004	147.000m	145.815m - 3000 IN 145.815m - 3000 OUT	0.500m	1.685m	431783.143	406429.529	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
005	147.000m	145.740m - 3000 IN 145.740m - 3000 OUT	0.500m	1.760m	431814.078	406411.116	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
006	147.000m	145.675m - 3000 IN 145.675m - 3000 OUT	0.500m	1.825m	431842.982	406397.386	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
007	147.000m	145.525m - 3000 IN 145.525m - 3000 OUT	0.500m	1.975m	431907.739	406359.550	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
008	147.013m	145.345m - 3000 IN 145.345m - 3000 OUT	0.500m	2.168m	431981.367	406307.792	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
009	147.214m	145.165m - 3000 IN 145.165m - 3000 OUT	0.500m	2.549m	432055.913	406257.364	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
010	147.000m	144.985m - 3000 IN 144.985m - 3000 OUT	0.500m	2.515m	432083.366	406343.075	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
011	147.000m	144.805m - 3000 IN 144.805m - 3000 OUT	0.500m	2.695m	432110.819	406428.786	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
012	147.000m	144.775m - 3000 IN 144.775m - 3000 OUT	0.500m	2.725m	432115.089	406442.119	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
013	134.900m	134.000m - 3000 OUT	0.500m	1.400m	431693.009	40628.016	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
014	134.900m	133.910m - 3000 IN 133.910m - 3000 OUT	0.500m	1.490m	431732.030	406705.603	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
015	134.900m	133.730m - 3000 IN 133.730m - 3000 OUT	0.500m	1.670m	431810.073	406660.777	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
016	134.900m	133.550m - 3000 IN 133.550m - 3000 OUT	0.500m	1.850m	431888.115	406615.951	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
017	134.900m	133.370m - 3000 IN 133.370m - 3000 OUT	0.500m	2.030m	431966.158	406571.125	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
018	134.900m	133.190m - 3000 IN 133.190m - 3000 OUT	0.500m	2.210m	432044.201	406526.300	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
019	134.902m	133.000m - 3000 IN 133.000m - 3000 IN 132.925m - 3750 OUT	0.500m	2.477m	432122.243	406481.474	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
020	134.900m	132.810m - 3750 IN 132.810m - 3750 OUT	0.500m	2.590m	432147.344	406518.823	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
021	134.900m	132.585m - 3750 IN 132.585m - 3750 OUT	0.500m	2.815m	432194.199	406495.664	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
022	134.900m	132.515m - 3750 IN 132.515m - 3750 OUT	0.500m	2.885m	432210.696	406461.038	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
023	132.035m	131.000m - 3750 IN 131.000m - 3750 OUT	0.500m	1.535m	432236.167	406645.238	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
024	130.495m	129.500m - 3750 IN 129.500m - 3750 OUT	0.500m	1.495m	432249.687	406677.521	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
025	128.498m	127.700m - 3750 IN 127.700m - 3750 OUT	0.500m	1.498m	432186.042	406741.156	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
026	126.853m	125.850m - 3750 IN 125.850m - 3750 OUT	0.500m	1.503m	432162.457	406767.017	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
027	120.077m	119.100m - 3750 IN 119.100m - 3750 OUT	0.500m	1.477m	432131.593	406775.467	15000	TYPE B	600x600 - CLASS C250	CATCHPIT
028	124.881m	123.980m - 3000 OUT	0.500m	1.401m	431921.780	406872.183	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
029	123.307m	122.400m - 3000 IN 122.400m - 3000 OUT	0.500m	1.407m	431980.446	406859.600	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
030	122.921m	122.000m - 3000 IN 122.000m - 3000 OUT	0.500m	1.421m	432035.276	406840.689	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
031	120.034m	118.975m - 3750 IN 118.975m - 3000 IN 118.975m - 3750 OUT	0.500m	1.559m	432098.106	406805.528	15000	TYPE B	600x600 - CLASS C250	CATCHPIT

**4848-LD-NETWORK-02 MANHOLE SCHEDULE**

REF.	COVER LEVEL	INVERT LEVEL	SUMP DEPTH	DEPTH	EASTING	NORTHING	DIAMETER	TYPE	COVER	NOTES
032	135.042m	134.140m - 2250 OUT	0.500m	1.402m	431493.297	406910.424	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
033	128.787m	127.880m - 2250 IN 127.880m - 2250 OUT	0.500m	1.407m	431556.395	406940.733	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
034	125.450m	124.550m - 2250 IN 124.550m - 2250 OUT	0.500m	1.400m	431588.701	406954.199	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
035	123.405m	122.700m - 2250 IN 122.700m - 2250 OUT	0.500m	1.405m	431617.519	406962.536	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
036	122.452m	121.750m - 2250 IN 121.750m - 2250 OUT	0.500m	1.402m	431649.517	406962.201	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
037	121.144m	120.250m - 2250 IN 120.250m - 2250 OUT	0.500m	1.414m	431676.295	406954.018	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
038	120.248m	119.325m - 2250 IN 119.325m - 2250 OUT	0.500m	1.423m	431699.133	406941.591	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
039	121.957m	121.000m - 2250 IN 121.000m - 2250 OUT	0.500m	1.457m	431837.388	406888.735	12000	TYPE B	600x600 - CLASS C250	CATCHPIT
040	120.04									