Sewers for Adoption 6th Edition - Section 104 - Adoptable Manhole Schedule - Foul Water

Manhole Name / Coordinates	Cover Level / Manhole Depth	Layout Diagram	Pipe	Inverts	Pipe Diameter	Manhole Size	Manhole Class	Manhole Cover
F01	3.326	2 1 3 0	1 2 3	0.825 0.925 0.925	150 100 100	1500	B	D400
529527.076 325107.829	2.451		0	0.875	150			
F02	3.162	2 1 3 0	1 2 3	0.708 0.758 0.758	150 100 100	1500	B	D400
529502.815 325114.047	2.454		0	0.708	150			
F03	3.037	2 1 0	1 2	0.595 0.645	150 100	1200	B	D400
529485.870 325114.451	2.442		0	0.595	150			
F04	2.928	3 2 1 0	1 2 3	0.457 0.457 0.457	150 150 150	1500	B	D400
529467.185 325123.340	2.471		0	0.457	150			
F05	2.987	1 2 0	1 2	1.437 1.437	100 100	1200	B	D400
529477.665 325150.230	1.600		0	1.387	150			
F06	3.175	1 2 0	1 2	1.625 1.625	100 100	1200	B	D400
529430.330 325128.675	1.600		0	1.575	150			
F07	2.925	2 1 0	1 2	0.267 0.317	150 100	1200	B	D400
529450.698 325100.051	2.658		0	0.267	150			
F08	3.000	1 2 0	1 2	0.112 0.162	150 100	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529444.874 325077.589	2.888		0	0.112	150			
F09	2.941	1 0	1	-0.049	150	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529447.311 325053.605	2.990		0	-0.049	150			
F10	2.908	2 1 0	1 2	-0.123 -0.073	150 100	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529442.727 325043.425	3.031		0	-0.123	150			
F11	2.970	1 0	1	-0.179	150	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529433.847 325038.479	3.149		0	-0.179	150			
F12	2.983	2 1 0	1 2	-0.293 -0.243	150 100	1200 CPM Perfect Manhole	A CPM Perfect Manhole	D400
529444.062 325023.467	3.276		0	-0.293	150			
F13	3.098	2 1 0	1 2	-0.451 -0.401	150 100	1200 CPM Perfect Manhole	A CPM Perfect Manhole	D400
529461.836 325007.693	3.549		0	-0.451	150			
F14	3.000	1 2 0	1 2	-0.568 -0.568	150 150	1500 CPM Perfect Manhole	A CPM Perfect Manhole	D400
529477.429 324999.457	3.568		0	-0.568	150			
F15	2.990	2 1 0	1 2	-0.715 -0.715	150 150	1200 CPM Perfect Manhole	A CPM Perfect Manhole	D400
529468.652 324979.302	3.705		0	-0.715	150			
F16	3.362	3 1 2 0	1 2 3	1.355 1.405 1.405	150 100 100	1500 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529429.296 324973.945	2.007		0	1.355	150			
F17	3.172	1 0	1	0.463	150	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529452.540 324957.392	2.709		0	0.463	150			
F18	3.124	1 0	1	0.241	150	1200 CPM Perfect Manhole	B CPM Perfect Manhole	D400
529459.341 324959.448	2.883		0	0.241	150			
F19 WW	3.100	1 0	1	-0.850	150	2100	Wet Well	Pre-Lift Facta B 1500 x 800
529483.792 324860.197	5.050		sump 0	-1.950 1.750	sump B4 pump pipework			
F20 VC	3.100	1 0	1	1.750	B4 pump pipework	2400 x 1800	Valve Chamber	2400 x 1800 clear opening GRS
529485.421 324983.618	1.700		sump 0	1.400 1.750	sump 110 OD MDPE SDR 17			
F21	2.780	1 0	1	2.050	110 OD MDPE SDR 17	1240x675	C	D400
529393.243 325045.825	0.730		0	2.050	150			
F22	2.900	1 0	1	-0.804	150	1200 CPM Perfect Manhole	A CPM Perfect Manhole	D400
529400.649 324973.592	3.704		0	-0.804	150			

Sewers for Adoption 6th Edition - Section 38 - Adoptable Manhole Schedule - Highway Drainage System

Manhole Name / Coordinates	Cover Level / Manhole Depth	Layout Diagram	Pipe	Inverts	Pipe Diameter	Manhole Size	Manhole Class	Manhole Cover
HD1	3.300	1 0	1	2.261	150	1240 x 675	C	D400
529430.175 329711.096	1.114		0	2.186	225			
HD2	3.136	1 0	1	2.032	225	1240 x 675	C	D400
529451.492 329555.920	1.104		0	2.032	225			
HD3 (hfd)	3.025	1 0	1	1.985	225	1240 x 750	C	D400
529459.484 329454.246	1.115		0	1.910	300			
HD4 (hfd)	2.854	1 0	1	1.826	300	1240 x 750	C	D400
529475.637 329382.609	1.028		0	1.826	300			
HD5	2.924	1 0	1	1.819	300	1240 x 750	C	D400
529473.186 329383.774	1.105		0	1.819	300			
HD6	2.927	2 1 0	1 2	1.843 1.768	225 300	1240 x 750	C	D400
529482.091 325002.459	1.159		0	1.768	300			
HD7 (hfd)	2.833	1 0	1	1.743	300	1240 x 750	C	D400
529491.057 324998.183	1.090		0	1.743	300			
HD8	3.200	1 0	1	1.605	300	1200	E	D400
529514.839 325040.154	1.595		0	1.605	300			
HD9 (hfd)	3.300	1 2 0	1 2	1.470 1.470	300 300	1200	B	D400
529538.082 325096.992	1.830		0	1.470	300			
HD10	3.300	1 0	1	1.445	300	1200	B	D400
529542.350 325105.960	1.855		0	1.445	300			
HD11	3.200	1 0	1	1.305	300	1200	B	D400
529566.487 325156.670	1.895		0	1.305	300			
HD12	3.300	1 0	1	1.269	300	1200	B	D400
529531.141 325171.023	2.091		0	1.269	300			
HD13	3.132	1 2 0	1 2	1.177 1.252	300 225	1200	B	D400
529518.381 325171.637	1.955		0	1.177	300			
HD14 (udss)	2.970	1 2 0	1 2	1.101 1.176	300 225	1200	B	D400
529488.135 325169.760	1.869		0	1.101	300			
HD15 pond inlet	2.191	1	1	1.020	300 fitted with trash screen	Headwall	Headwall	n/a
529466.222 325193.431	1.250		apron	0.941	apron			
HD16 pond outlet & Hydrobrake f/c	2.120	2 1 3 0	1 2 3	1.020 1.020 1.020	150 pipe sleeve through weir wall fitted with Hydrobrake Optimum flow control ref SHE-0075-2500-1000-2500 100 pipe sleeve through weir wall fitted with drain down pointsock weir wall set 600mm above normal water level	headwall	headwall	n/a
529437.053 325204.297	1.100 (1.400 lower apron)		0 apron	1.020 0.720	225 apron			
HD17 Outfall	2.100	1 0	1	0.950	300 fitted with flap valve	Headwall	Headwall	n/a
529421.213 325214.463	1.250		apron	0.850	apron			
HD18 (hfd)	2.834	1 0	1	2.106	150	1240 x 675	C	D400
529443.142 325033.319	0.883		0	2.031	225			
HD19 (hfd)	2.834	0				1240 x 675	C	D400
529443.411 325036.851	0.792		0	2.042	225			
HD20 (hfd)	2.828	1 0	1	1.970	225	1240 x 675	C	D400
529452.040 325053.970	0.858		0	1.970	225			
HD21 (hfd)	2.727	1 0	1	1.867	225	1240 x 675	C	D400
529459.559 325074.008	0.860		0	1.867	225			

Sewers for Adoption 6th Edition - Section 38 - Adoptable Manhole Schedule - Highway Drainage System

Manhole Name / Coordinates	Cover Level / Manhole Depth	Layout Diagram	Pipe	Inverts	Pipe Diameter	Manhole Size	Manhole Class	Manhole Cover
HD22 (hfd)	2.727	1 0	1	1.542	225	1240 x 750	C	D400
529460.745 325080.057	0.960		0	1.467	300			
HD23 (hfd)	2.845	1 0	1	1.690	300	1240 x 750	C	D400
529458.556 325103.220	1.155		0	1.690	300			
HD24 (hfd)	2.949	1 0	1	1.593	300	1240 x 750	C	D400
529490.849 325109.215	1.356		0	1.593	300			
HD25 (hfd)	3.050	0				1240 x 675	C	D400
529432.453 325133.424	1.000		0	2.050	225			
HD26 (hfd)	2.796	1 0	1	1.788	225	1240 x 675	C	D400
529469.000 325132.660	1.008		0	1.788	225			
HD27 (hfd)	2.944	1 0	1	1.560	225	1240 x 675	C	D400
529460.782 325163.831	1.384		0	1.560	225			
HD13A	2.742	0				1240 x 675	C	D400
529519.809 325150.447	1.431		0	1.311	225			
HD28 (hfd)	2.910	1 0	1	1.915	225	1240 x 675	C	D400
529458.443 325068.784	0.995		0	1.915	225			
HD29 (hfd)	2.790	1 0	1	1.733	300	1240 x 750	C	D400
529451.579 325087.719	1.057		0	1.733	300			
HD30 (hfd)	2.852	1 0	1	1.639	300	1240 x 750	C	D400
529473.430 325114.764	1.213		0	1.639	300			

copyright © HALL infrastructure DESIGN Ltd.

NOTES:

ALL SEWERS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROCEDURES AND SPECIFICATIONS OF SEWERS FOR ADOPTION 6TH EDITION (MARCH 2006).

PRIVATE STORM BRANCH CONNECTIONS TO BE 100mm dia UNLESS OTHERWISE STATED.
GULLY CONNECTION TO BE 150mm dia. CLAY PIPES EXTRA STRENGTH LAID NO FLATTER THAN 1:150.
PRIVATE FOUL DRAINS CONNECTIONS TO BE 150mm dia. LAID NO FLATTER THAN 1:40 WHERE SERVING 6 PLOTS OR LESS AND 150mm dia LAID NO FLATTER THAN 1:150 WHERE SERVING 10 PLOTS OR MORE (UNLESS OTHERWISE STATED).

ALL SEWERS AND LATERAL DRAINS WITHIN DOMESTIC CURTILAGE OF DIAMETER 100mm AND 150mm TO BE EITHER CLAY PIPES EXTRA STRENGTH OR PVC-U TO BS EN 1401-1:1998 & BS 4660:2000.
ALL PRIVATE DRAINAGE CONNECTIONS WITHIN ADOPTED HIGHWAY TO BE CLAY PIPES EXTRA STRENGTH.

ALL PIPEWORK TO BE LAID SOFFIT TO SOFFIT UNLESS OTHERWISE STATED.
ALL HIGHWAY DRAINAGE PIPES NOT DENOTED OTHERWISE to be clay 225mm dia or 300mm dia WITH COVER MORE THAN 1.2m TO BE POLYPIPE HIGHGRAIN PERFORATED (IN FILTER STRIPS AND UNDER DRAINED SWALES) OR POLYPIPE HIGHGRAIN SOLID (IN ROAD CROSSING LOCATIONS AND THROUGH PUBLIC OPEN SPACE) WITH CLASS 1 BEDDING (150mm - 5mm GRAVEL RES & SURROUND UNLESS DENOTED OTHERWISE).
ALL CLAY PIPES 150mm dia & 225mmØ DITTO TO BE EXTRA STRENGTH WITH CLASS 1 BEDDING (10mm - 5mm GRAVEL RES AND SURROUND).
ALL HIGHWAY DRAINAGE PIPES NOT DENOTED OTHERWISE to be clay 225mm dia or 300mm dia WITH COVER LESS THAN 1.2m TO BE PVC-U POLYPIPE HIGHGRAIN PERFORATED (IN FILTER STRIPS AND UNDER DRAINED SWALES) OR POLYPIPE HIGHGRAIN SOLID (IN ROAD CROSSING LOCATIONS AND THROUGH PUBLIC OPEN SPACE) WITH CLASS 1 BEDDING (150mm - 5mm GRAVEL RES & SURROUND UNLESS DENOTED OTHERWISE), CONCRETE PROTECTION PROVIDED WHERE THE PIPE DOES NOT FORM PART OF A FILTER STRUCTURE.
ALL CLAY PIPES 150mmØ & 225mmØ DITTO TO BE EXTRA STRENGTH WITH CONCRETE PROTECTION.

PRECAST CONCRETE PRODUCTS AND IN SITU CONCRETE TO CONTAIN A MINIMUM CLASS 3 S.R.C.
STRUCTURAL CONCRETE TO BE IN ACCORDANCE WITH BS 5328 AND WET TO BE LESS THAN GRADE FM2 WHEN REINFORCED AND GEN3 IN ALL OTHER SITUATIONS.
CAST CONCRETE SHALL BE FINISHED TO PRODUCE A "FAIR" SURFACE WHERE EXPOSED AND SHALL HAVE A "BROOM" FINISH IN ALL OTHER SITUATIONS. (UNLESS AS DEFINED IN CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY - 3TH EDITION).
STEEL WORK SHALL BE IN ACCORDANCE WITH BS 4461.

ALL MANHOLE COVERS TO BE 600x600 CLEAR OPENING (UNLESS STATED OTHERWISE ON MANHOLE SCHEDULE) x TYPE C MANHOLES IN ACCORDANCE WITH B.S. EN124 CLASS D400 AND EMBOSSED PF OR SW AS APPROPRIATE.

THE SPECIFICATION IN ALL RESPECTS SHALL BE IN ACCORDANCE WITH THE CURRENT LINCOLNSHIRE COUNTY COUNCIL DESIGN GUIDE FOR RESIDENTIAL AREAS AND DEVELOPMENT ROAD SPECIFICATION AND CONSTRUCTION PUBLICATIONS IN FORCE IN THE COUNTY AT THE TIME OF CONSTRUCTION.

ALL GULLIES WITHIN THE HIGHWAY SHALL CONFORM TO BS EN124:2007 + (CLASS D400). ALL GULLIES SHALL BE HINGED BOTH NON- REMOVABLE AND SHALL HAVE A NOMINAL WIDTH OF 450mm WITH A MINIMUM AREA OF WATERWAY OF 900cm² FOR CARRIAGEWAY AND A CLEAR OPENING OF AT LEAST 300mm x 300mm FOR FOOTWAYS. THE UPPER SURFACE OF GULLY GRATINGS SHALL BE FLAT AND SLOTS IN GRATINGS OR BETWEEN GRATINGS AND FRAMES SHALL NOT BE ORIENTATED PARALLEL TO THE DIRECTION OF TRAFFIC EXCEPT WHERE THE SLOTS ARE LESS THAN 15mm LONG OR LESS THAN 20mm WIDE. WHERE GRADIENTS ARE STEEPER THAN 1:6A, STORM PATTERN GRIDS SHALL BE PROVIDED.

ALL SIGNS AND LINE MARKINGS ARE TO BE AGREED WITH THE SENIOR HIGHWAYS OFFICER PRIOR TO CONSTRUCTION.

BT CHAMBERS AND ANGLIAN WATER METERS ARE NOT TO BE LOCATED WITHIN PEDESTRIAN CROSSING POINTS OR VEHICLE ACCESSES.

THE MINIMUM LONGITUDINAL FALL FOR HIGHWAYS, WITHOUT CHANNEL BLOCKS SHALL BE 1 in 150, AND WITH CHANNEL BLOCKS 1 in 250. IN ADDITION, ENSURE THAT THE FIRST SECTION OF ANY SIDE ROAD FALLS AWAY FROM THE ROAD TO WHICH IT IS CONNECTING. IF GENERAL TOPOGRAPHY REQUIRES IT TO RISE, THEN CHANGE OF DIRECTION SHOULD TAKE PLACE AFTER THE FIRST SET OF GULLIES. THIS IS TO ENSURE A "FALSE CHANNEL" WITH ASSOCIATED DRAINAGE PROBLEMS IS NOT CREATED IN THE BELLMOUTH OF JUNCTIONS. NO PRIVATE SURFACE WATER SHALL DISCHARGE ONTO THE ADOPTABLE HIGHWAY.

RECONSTRUCTION OF EXISTING CARRIAGEWAY AND FOOTWAYS THAT ARE AFFECTED BY THESE DEVELOPMENT WORKS ARE TO BE SPECIFIED AND AGREED BY THE SENIOR HIGHWAYS OFFICER PRIOR TO CONSTRUCTION.

Domestic Curtilage Drainage Notes

Plot 1 DENOTES PLOT NUMBER
1.250 DENOTES SUGGESTED FINISHED FLOOR LEVEL
(2.23) DENOTES EXISTING GROUND LEVEL

- 225mmØ HIGHWAY DRAIN (S30) - MATERIAL AS STATED
- 300mmØ HIGHWAY DRAIN (S30) - MATERIAL AS STATED
- 100mm Ø (min 1:40) SURFACE WATER HOUSE DRAIN (PRIVATE).
- 150mm Ø UNLESS STATED (min 1:150) (S) - PLOTS FOUL WATER SEWER (S30A).
- 100mm Ø (min 1:40) 150mm Ø (min 1:150) FOUL WATER HOUSE DRAIN (PRIVATE).

- RAINWATER PIPE ADAPTOR
- rwp-sd RAINWATER PIPE - SURFACE DISCHARGE AS DETAIL.
- STP STP ADAPTOR
- WB WASH BASIN / BATH / SHOWER ADAPTOR
- WB WC ADAPTOR
- BG BACK INLET GULLY
- IC INSPECTION CHAMBER
- RE SOURCE CONTROL OUTLET WITH SLT TRAP AS DETAIL.
- POLYPROPYLENE ACCESS CHAMBER (PRIVATE) - FOUL
- POLYPROPYLENE MINI ACCESS CHAMBER (PRIVATE) - FOUL

- UNDER DRAINED BIOAQUIFIC FILTER DRAIN WITH 225mmØ OR 300mmØ PERFORATED PIPES. (HIGHWAY DRAINAGE SYSTEM) TO BE ADOPTED BY LINCOLNSHIRE COUNTY COUNCIL UNDER S38 AGREEMENT.
- UNDER DRAINED BIOAQUIFIC SHALLOW SWALE WITH 300mmØ PERFORATED PIPES. (HIGHWAY DRAINAGE SYSTEM) TO BE ADOPTED BY LINCOLNSHIRE COUNTY COUNCIL UNDER S38 AGREEMENT.
- UNDER DRAINED NON- BIOAQUIFIC DEEP SWALE (PERIMETER) WITH 300mmØ PERFORATED PIPES. (HIGHWAY DRAINAGE SYSTEM) TO BE ADOPTED BY LINCOLNSHIRE COUNTY COUNCIL UNDER S38 AGREEMENT.

- DOMESTIC CURTILAGE PERMEABLE PAVED DRIVEWAY LEVELS TO BE SET SO AS TO PROMOTE FLOWS WITHIN THE SUB BASE RESERVOIR LAYER AWAY FROM PUBLIC HIGHWAY TOWARDS SOFT LANDSCAPING AREAS.
- 300mm s/b — DENOTES THE MINIMUM THICKNESS OF TYPE 3 SUB BASE (30% VOIDS) REQUIRED IN THE RESERVOIR LAYER TO ACCOMMODATE A 1:100 YEAR STORM EVENT PLUS 30% CLIMATE CHANGE WITHOUT EXCEEDENCE.
- 450 x 1200 x 450 DEEP — SHALLOW CELLULAR CRATE SOAKAWAY FOR ROOF WATER DRAINAGE. SIZES & DETAILS AS PER SITE LAYOUT. DESIGNED TO DRAIN 10 YEAR STANDARD WITH ADDITIONAL VOLUME FOR 100 YEAR PLUS CLIMATE CHANGE

POLYPROPYLENE ACCESS CHAMBERS (TYPE 1) TO BE USED UP TO 1.0m DEEP.
POLYPROPYLENE ACCESS CHAMBERS (TYPE 4) TO BE USED UP TO 2.5m DEEP (SERVING MAX 3 PLOTS).
ALL CHAMBERS ON SEWERS AND LATERALS WITHIN GARDEN AREAS, FOOTWAYS AND DRIVEWAYS TO BE FITTED WITH BS EN 124 GRADE B125 COVERS.
CHAMBERS WITHIN PARKING COURTYARDS TO BE FITTED WITH BS EN 124 GRADE D-400 COVERS.
CHAMBERS WITHIN FOOTWAYS, DRIVEWAYS AND PARKING COURTYARDS TO BE PROVIDED WITH 150mm DEEP C20 CONCRETE COLLAR.
WHERE CHAMBERS ARE WITHIN 1.2m OF ANY BUILDING AND THE INVERT LEVEL OF THE CHAMBER IS MORE THAN 600mm DEEP ENSURE BUILDING FOUNDATION IS EACALE DEEPENED SO THAT BOTTOM OF FOUNDATION IS 150mm BELOW CHAMBER INVERT LEVEL.
DOMESTIC DRAINAGE TO BE UPVC OR CLAY.
100mm Ø DOMESTIC DRAINAGE (not S104) TO BE LAID NO FLATTER THAN 1:80 GRADIENT.
150mm Ø DOMESTIC DRAINAGE (not S104) TO BE LAID NO FLATTER THAN 1:150 GRADIENT.

DO NOT SCALE. USE FIGURED DIMENSIONS ONLY. CHECK ON SITE AND ALL DISCREPANCIES TO BE REPORTED TO HALL infrastructure DESIGN Ltd.

AMENDMENTS:

REF.	DESCRIPTION.	DATE.	BY.
A	Amended as per AWS comments 31.12.17	02.01.18	CWH
B	Foul sewers at pump station amended.	09.01.18	CWH
C	Amended as per LCC comments 15.01.18	17.01.18	CWH
D	Amended as per LCC comments 12.02.18	14.02.18	CWH
E	FW pumping main, F23 and connection to existing changed as requested by AWS 13.11.18	14.11.18	CWH
F	CPM Perfect Manhole types shown as requested by client.	26.06.19	CWH

CLIENT:
Seagate Homes (UK) Ltd

PROJECT:
Small Drove
Weston

TITLE:
Manhole Schedules

SCALE:	DATE:	SIZE:
n/a	November 2016	A1

DRAWING No:	DRAWN BY:	CHECKED BY:
1615/05-F		

HALL INFRASTRUCTURE DESIGN LTD.
Silverdale, 116 Humberston Avenue,
Humberston, N E Lincs, DN36 4SU
Tel: 01472 814137 Mob: 07891 503179
email: hall.design@btinternet.com
web: sites.google.com/site/hallinfrastructuredesign