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- E 1. THIS DRAWING IS NOT TO BE SCALED.
- 篇 2. TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS.
- 3. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT AND ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.

4. 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).

5. ALL LEVELS ARE TO TOPOGRAPHICAL SURVEY.

6. COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.

- 7. DESIGN OF THE DRAINAGE CHANNELS, FOUI
- 8. FOR DETAILS OF MANHOLE TYPES AND PIPE
- 9. CELLULAR STORAGE IS BASED UPON A PROP

# ← → FOUL WATER SEWER $\bigcirc$ 0 ٠ **- →** --- $\bigcirc$ 0 \_\_\_\_\_ G 🛛 RG 🛛 RWP ᄋ BD FG 🛛 ----D $(0 \quad 0)$ (0 0)x IL XX.XX

FOUL WATER MANHOLE FOUL WATER INSPECTION CHAMBER FOUL WATER CONNECTION SURFACE WATER SEWER SURFACE WATER MANHOLE SURFACE WATER INSPECTION CHAMBER SURFACE WATER SEWER (>600mm) SURFACE WATER RISING MAIN FOUL WATER RISING MAIN SURFACE WATER CHANNEL TO MANUFACTURER SPECIFICATION UNO GULLY ROAD GULLY RE SURFACE WATER RODDING EYE SURFACE WATER CONNECTION ATTENUATION BASIN/TANK BACK DROP PROPOSED FOUL WATER FLOOR GULLY LAND DRAIN (100mm DIAMETER PERFORATED PIPE) HEADWALL

LEGEND

EXISTING SEWER/DRAINAGE FROM PREVIOUS PHASE KERB INLET DRAIN CLASS 1 FULL RETENTION SEPARATOR WITH ALARM

FOUL TREATMENT WORKS

SMALL ATTENUATION POND/BIO-RETENTION AREA SWALE

PIPE INVERT LEVEL FLOOD COMPENSATION BASIN

ND SURFACE CONNECTIONS IS INDICATIVE ONLY AND IS SUBJECT TO DETAILED DESIGN. EDDING ETC, SEE STANDARD DETAIL DRAWING(S). IETARY PRODUCT AND IS SUBJECT TO DETAILED DESIGN. RAWING "PROPOSED SITE PLAN" DRAWING REF. 4036-X3-001 Phase 3 Site Layout - 18-09-24		REVISIONS				Hydrock Now Birmingham B3 2HB t: +44(0)1217 525197 e: birmingham@hydrock.com CLIENT		DRAINAGE OVERVIEW FOUL SEWER TREATMENT		
						A BIG BO	X	hydrock project no. 22281	scale @ A1 1:1000	
						PROJECT		STATUS DESCRIPTION	W & COMMEN	IT S3
	P02 P01 Rev.	REVISED PLANNING PLANNING Revision Notes	20/11/24 19/09/24 Date	AB MC Drawn By	AB   CK AB   CK Checked   Approved	SYMMETRY PARK		drawing no. 22281-HYD-XX-XX-D	R-C-0500	revision P02



COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.

REVISIO	NS				Hydrock NOW Stantec	2nd Floor 172 Edmund Street Birmingham B3 2HB t: +44(0)1217 525197 e: birmingham@hydrock.com	DRAINAGE FOUL SHEET 1	SEWER TREATMENT	
					A BIG BO	X	hydrock project no. 22281	scale @ a1 1:500	
					PROJECT PHASE 3. BICESTER		SUITABLE FOR R	EVIEW & COMMENT	status S3
P02	REVISED PLANNING	20/11/24	AB	AB   CK			DRAWING NO.		REVISION
P01	PLANNING	19/09/24	MC	AB   CK	STIVIIVIEIRT PARK		22281-HYD-XX-X	X-DR-C-0501	P02
Rev.	Revision Notes	Date	Drawn By	Checked   Approved					102

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#### LEGEND

FOUL WATER SEWER FOUL WATER MANHOLE FOUL WATER INSPECTION CHAMBER FOUL WATER CONNECTION SURFACE WATER SEWER SURFACE WATER MANHOLE SURFACE WATER INSPECTION CHAMBER SURFACE WATER SEWER (>600mm) SURFACE WATER RISING MAIN FOUL WATER RISING MAIN SURFACE WATER CHANNEL TO MANUFACTURER SPECIFICATION UNO GULLY ROAD GULLY SURFACE WATER RODDING EYE SURFACE WATER CONNECTION ATTENUATION BASIN/TANK BACK DROP PROPOSED FOUL WATER FLOOR GULLY LAND DRAIN (100mm DIAMETER PERFORATED HEADWALL EXISTING SEWER/DRAINAGE FROM PREVIOUS PHASE KERB INLET DRAIN CLASS 1 FULL RETENTION SEPARATOR WITH ALARM FOUL TREATMENT WORKS SMALL ATTENUATION POND/BIO-RETENTION AREA SWALE

PIPE INVERT LEVEL FLOOD COMPENSATION BASIN



			Surface Mate	r Manhala Saha	dulo			
	Tuno					C	Fasting	Northing
Manhole Reference	туре	Diameter (mm)	Cover Level (m)	Invert Level (m)	Depth (m)	Cover	Easting	Northing
501	В	1200	64.84	62.88	1.96	E600	460702.841	220578.057
502	В	1200	64.31	62.74	1.57	E600	460675.286	220580.861
503	В	1350	64.84	62.49	2.35	E600	460684.469	220592.502
<u> </u>	В	1200	64.83	63.78	1.05	E600	460626.295	220648.223
505	В	1350	64.86	62.24	2.62	E600	460654.894	220615.757
506	В	1350	65.08	62.12	2.96	E600	460637.954	220612.450
<u> </u>	В	1350	65.25	62.01	3.24	B125	460621.830	220616.240
508	C	1200	64.77	63.65	1.12	B125	460632.659	220628.529
\$09	В	1350	65.11	61.91	3.20	C250 (R)	460609.943	220625.491
S10	A	1350	65.16	61.67	3.49	C250 (R)	460590.254	220599.345
S11	A	1350	65.17	61.33	3.84	C250	460559.389	220559.964
S12	СР	1350	64.73	61.06	3.67	C250	460535.394	220526.999
S13	A	1350	64.77	60.83	3.94	C250	460552.991	220512.916
S14	В	1200	65.30	63.43	1.87	B125	460691.254	220517.248
S15	В	1350	65.30	62.97	2.33	B125	460673.295	220495.055
S16	В	1350	65.28	62.69	2.59	B125	460656.270	220473.124
S17	В	1350	65.30	62.25	3.05	B125	460627.235	220495.656
S18	В	1350	65.29	61.88	3.41	B125 (R)	460598.201	220518.188
S19	СР	1350	64.91	61.64	3.27	C250 (R)	460582.921	220499.238
S20	C	1350	65.30	63.46	1.84	B125 (R)	460609.857	220617.062
S21	В	1350	65.30	63.18	2.12	B125 (R)	460592.357	220595.202
S22	В	1500	65.30	62.82	2.48	B125 (R)	460575.108	220573.273
S23	В	1500	65.30	62.68	2.62	B125 (R)	460566.316	220562.238
S24	СР	1500	65.06	62.44	2.62	C250 (R)	460551.161	220543.295
S25	PS	1350	64.92	60.49	4.43	C250	460548.106	220528.748
S26	С	1200	64.80	64.33	0.47	C250 (R)	460537.970	220536.739
S27	С	1200	65.91	64.67	1.24	B125	460822.749	220692.671
S28	C	1200	65.91	64.16	1.75	B125	460790.816	220652.304
S29	В	1350	65.68	63.24	2.44	C250 (R)	460744.905	220590.237
S30	В	1350	65.67	62.70	2.97	C250 (R)	460702.098	220623.909
S31	В	1350	65.49	62.25	3.24	C250 (R)	460663.158	220654.232
<u> </u>	B	1350	65.09	62.13	2.96	F600	460653,155	220662.627
533	B	1350	65.25	62.37	2.88	F600	460723,721	220753.922
<u> </u>	B	1200	65 51	64.88	0.63	C250	460682 970	220682 754
<u> </u>	B	1200	65.12	62.26	2.86	F600	460702 749	220707 421
<u> </u>	B	1350	65.24	62.04	3 20	E600	460692 967	220714 579
	СР	1500	65.24	61 71	3.54	E600	460676 025	220693 545
		1500	65.50	61.57	3.94	E600	460663 924	220033.343
	B	1350	65.82	62.68	3.55	B125 (R)	460747 792	220710.057
<u> </u>	B	1350	65.84	62.57	3.14	C250	460734 630	220609.963
<u>ς</u> Δ1	Δ	1350	65.83	62.37	3.27	C250	460705 710	220009.903
		1350	65.72	62.33	3.50	C250	400703.710	220032.437
<u> </u>	 ∧	1250	65.00	61.06	2.01	E600	460602 012	220033.034
<u> </u>	<u> </u>	1250	65.00	61.90	3.52	C250	460700 220	220071.303
 ۲۸۵		1350	65 01	64 22	4.00	R125	460851 202	220001.303
545 CAC		1250	65.01	64.05	1.05	D125	400031.000	220730.333
C/7		1250	65.01	62 76	2.00	D125	400023.312	220733.479
547 CAO	D	1500		62.40	2.10	D123	400007.492	2207700 400
540 CAD	D	1500	ده.دی دב ۲۵	62.40	2.45	E000	400760.010	220700.480
049 CEO		1500	65.24		2.70	E600	400703.310	220770.337
550		1500	05.34		2.57	E000	400/3/.90/	220793.740
551	A	1500	05.35	61.51	3.84	E600	400674.126	220705.611
552	P5	1500	65.27	61.28	3.99	8125	460666.463	220695.906
555	C	1500	65.27	64.60	0.67	B125	460651.306	220699.190
\$56	B	1500	65.10	64.42	0.68	B125	460634.550	220677.251
S57	В	1200	64.92	63.87	1.05	C250	460634.563	220663.193
S58	В	1200	65.58	64.46	1.12	D400	460592.520	220679.077
S59	C	1200	65.85	64.73	1.12	D400	460539.728	220709.456
S60	В	1350	64.89	61.19	3.70	D400	460542.777	220537.142

## NOTES:

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FOUL:

BEDDING.

			Foul Water	Manhole Schedu	le				1.
Manhole Reference	Туре	Diameter (mm)	Cover Level (m)	Invert Level (m)	Depth (m)	Cover	Easting	Northing	
F01	C	1200	65.44	64.39	1.05	E600	460760.066	220794.150	2.
F02	В	1200	65.43	63.55	1.88	E600	460718.976	220740.981	
F03	В	1200	65.42	62.77	2.65	E600	460680.571	220691.118	3.
F04	A	1200	65.80	62.54	3.26	E600	460695.446	220680.141	]
F05	A	1200	65.81	62.38	3.43	E600	460688.085	220670.342	
F06	D2	450	65.92	65.02	0.90	B125 (R)	460688.457	220664.125	4.
F07	C	1200	64.97	63.92	1.05	E600	460721.311	220573.338	
F08	В	1200	64.96	62.93	2.03	E600	460659.143	220621.588	5
F09	PS	1200	64.83	62.71	2.12	E600	460641.965	220624.971	] .
F10	C	1200	65.07	64.40	0.67	C250 (R)	460552.664	220555.871	]
F11	D2	450	65.32	64.67	0.65	B125 (R)	460561.061	220553.939	1

- DENOTES CATCH PIT

CP

R

- DENOTES COVER TO BE RECESSED TO ACCOMMODATE BLOCK PAVING PS - DENOTES PUMPING STATION

				Hydrock
				PROJECT
				PHASE 3. BICESTE
EVISED PLANNING	20/11/24	AB	AB   CK	SVMMETRY PARK
PLANNING	19/09/24	MC	AB   CK	
Revision Notes	Date	Drawn By	Checked   Approved	

REVISIONS

REVISED PLANNI PLANNING

THIS DRAWING IS NOT TO BE SCALED.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.

'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).

THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.

THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATION AND FROM GROUNDWATER BY MEANS OF SUMPS, PUMPING AND DE-WATERING AS APPROPRIATE, IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS,

ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY' 7th EDITION FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.

PIPE MATERIAL SHALL BE AS FOLLOWS: 100Ø TO 225Ø - CLAYWARE TO BS EN 295 300Ø AND ABOVE - CONCRETE TO BS EN 1916.

CONCRETE PIPES TO BE USED WITHIN ESTATE ROAD

N.B PVCu PIPES TO BE EN 1401-1:2009 MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. PIPES OF LESS THAN 400MM DIAMETER TO HAVE A JETTING RESISTANCE OF 4000 PSI.

ALL FOUL PIPES ARE TO BE 100Ø UNLESS STATED OTHERWISE OR TO SUIT ABOVE GROUND PIPEWORK. SURFACE WATER PIPE DIAMETERS ARE AS INDICATED

PIPE GRADIENTS UNLESS SHOWN ARE:

MINIMUM GRADIENT WITHOUT W.C. TO BE 1:40, MINIMUM GRADIENT WITH W.C. TO BE 1:80,

SURFACE WATER: MINIMUM GRADIENT 1:80.

CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Z BEDDING.

UPVC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q OR Z

INTERNAL DRAINAGE BELOW BUILDING AREA TO HAVE CONCRETE BED AND SURROUND.

BACKFILL TO TRENCHES TO BE SUITABLE EXCAVATED MATERIAL.WELL COMPACTED IN 300mm LAYERS.

ROAD GULLY CONNECTIONS SHALL BE 150mm DIAMETER AND WITH CLASS Z BEDDING.

14. ROAD GULLIES SHALL BE TRAPPED 450mm DIAMETER x 900mm DEEP WITH CLASS D400 FRAME AND GRATING TO BS EN 124.

DESIGN OF THE DRAINAGE CHANNELS IS INDICATIVE ONLY. DETAILED DESIGN SHALL BE UNDERTAKEN BY THE CONTRACTOR'S PREFERRED CHANNEL MANUFACTURER/ SUPPLIER. INSTALLATION TO MANUFACTURES REQUIREMENTS.

16. ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. FOR DETAILS OF COVER TYPE & LOCATION, PLEASE REFER TO THE MANHOLE SCHEDULE. MANHOLE COVERS WITHIN BLOCK PAVED AREAS & BUILDINGS SHALL BE RECESSED, DOUBLE SEALED WITHIN BUILDING.

17. ALL LIGHT LIQUID SEPARATORS SHALL BE VENTILATED BY VENTILATION PIPEWORK TO MANUFACTURER'S RECOMMENDATIONS AND FITTED WITH AN ALARM TO PPG3 REQUIREMENTS.

18. VENTILATION SHALL BE PROVIDED AT THE HEAD OF FOUL DRAINAGE RUNS. FOR SETTING OUT OF SOIL AND RAINWATER PIPES, SEE ARCHITECT'S LAYOUT.

19. ACCESS FOR RODDING/ JETTING SHALL BE PROVIDED TO ALL SOIL AND RAINWATER DOWNPIPES ABOVE FINISHED FLOOR LEVEL.

20. FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC, SEE STANDARD DETAIL DRAWING(S).

21. COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.

22. THE CONTRACTOR IS TO PROTECT EXISTING BURIED PIPES (PARTICULARLY SHALLOW PIPES) AND TREE ROOTS FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION.

23. WHERE FOUL OR SURFACE WATER PIPES CROSS WITHIN 300mm OF EACH OTHER THE JUNCTION IS TO BE CONCRETE ENCASED AS PER THE TYPICAL CROSS OVER DETAIL.

24. MANHOLES WITHIN BLOCK PAVING TO BE RECESSED WITH MATCHING BLOCK PAVING INSERTS.

25. UPON COMPLETION OF THE DRAINAGE AND AFTER CLEANING, A CCTV SURVEY SHALL BE CARRIED OUT ON ALL BELOW GROUND DRAINAGE. A COPY OF DVD TO BE INCLUDED WITH H+S FILE.

SIPHONIC GULLIES TO BE SURROUNDED BY PRECAST CONCRETE UPSTAND OR SIMILAR APPROVED

2nd Floor 172 Edmund Street Birmingham B3 2HB t: +44(0)1217 525197 e: birmingham@hydrock.com		MANHOLE SCHEDU & NOTES	ULE				
RITAX BIG BO	X	hydrock project no. 22281	scale @ a1 N/A				
STER		SUITABLE FOR REV	/IEW & COMMENT	status S3			
ARK		drawing no. 22281-HYD-XX-XX-	DRAWING NO. 22281-HYD-XX-XX-DR-C-0520				
				1			

![](_page_4_Figure_0.jpeg)

### NOTES

- 为1. THIS DRAWING IS NOT TO BE SCALED.
- 낅 2. REFER TO NOTES ON DRAWING 22281-HYD-XX-XX-DR-C-0520.
- 3. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO
- 4. 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).

![](_page_4_Picture_8.jpeg)

![](_page_4_Picture_10.jpeg)

![](_page_4_Figure_12.jpeg)

#### LEGEND

FOUL WATER SEWER
FOUL WATER MANHOLE
FOUL WATER INSPECTION CHAMBER
FOUL WATER CONNECTION
SURFACE WATER SEWER
SURFACE WATER MANHOLE
SURFACE WATER INSPECTION CHAMBER
SURFACE WATER SEWER (>600mm)
SURFACE WATER RISING MAIN
FOUL WATER RISING MAIN
SURFACE WATER CHANNEL TO MANUFACTURER SPECIFICATION UNO
GULLY
ROAD GULLY
SURFACE WATER RODDING EYE
SURFACE WATER CONNECTION
ATTENUATION BASIN/TANK
BACK DROP
PROPOSED FOUL WATER FLOOR GULLY
LAND DRAIN (100mm DIAMETER PERFORATED PIPE)
HEADWALL
EXISTING SEWER/DRAINAGE FROM PREVIOUS PHASE
KERB INLET DRAIN
CLASS 1 FULL RETENTION SEPARATOR WITH ALARM
FOUL TREATMENT WORKS
SMALL ATTENUATION POND/BIO-RETENTION AREA
SWALE
PIPE INVERT LEVEL

FLOOD COMPENSATION BASIN

2nd Floor 172 Edmund Street Birmingham B3 2HB t: +44(0)1217 525197 e: birmingham@hydrock.com							
		hydrock project no.	SCALE @ A1 1:1000				
STER		STATUS DESCRIPTION	EVIEW & COMMENT	status S3			
RK		DRAWING NO. 22281-HYD-XX-XX	revision PO2				