

Drainage - Proposed FW Network Manhole Schedule									
Chamber Reference	Chamber Type	Diameter (mm)	Invert Level (m AOD)	Approx. Cover level (m AOD)	Approx. Cover to Invert (m)	Incoming Connections	Cover Type	Remarks	Co-ordinates
FW01	Type 4	470	57.110	58.000	0.890	From: SG6, Ø: 100, IL: 57.110 From: SVP, Ø: 100, IL: 57.110	470 diameter B125 cover		E: 384788.887 N: 400286.394
FW02	Type 4	470	56.815	58.000	1.185	From: FW01, Ø: 100, IL: 56.865 From: SG13, Ø: 100, IL: 56.865 From: SVP, Ø: 100, IL: 56.865	470 diameter B125 cover		E: 384808.776 N: 400276.154
FW03	Type 4	470	56.603	58.000	1.397		470 diameter B125 cover		E: 384812.816 N: 400274.060
FW04	Type 2	1200	56.359	57.850	1.491	From: FW03, Ø: 150, IL: 56.359	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384829.509 N: 400265.483
FW05	Type 4	470	56.900	58.000	1.100	From: SG1, Ø: 100, IL: 56.900 From: SG2, Ø: 100, IL: 56.900	470 diameter B125 cover		E: 384821.654 N: 400260.184
FW06	Type 4	470	56.900	58.000	1.100	From: SG3, Ø: 100, IL: 56.900 From: SG4, Ø: 100, IL: 56.900	470 diameter B125 cover		E: 384809.713 N: 400236.497
FW07	Type 4	470	56.800	57.985	1.185	From: SVP, Ø: 100, IL: 56.800 From: SVP, Ø: 100, IL: 56.800	470 diameter B125 cover		E: 384812.281 N: 400226.360
FW08	Type 4	470	56.800	58.000	1.200	From: SG17, Ø: 100, IL: 56.800 From: SG18, Ø: 100, IL: 56.800 From: SG19, Ø: 100, IL: 56.800	470 diameter B125 cover		E: 384809.136 N: 400229.921
FW09	Type 2	1200	55.852	58.000	2.148	From: FW04, Ø: 150, IL: 55.852 From: FW07, Ø: 100, IL: 56.750 From: FW08, Ø: 100, IL: 55.710	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	FW07 and FW08 to backdrop	E: 384810.742 N: 400227.147
FW10	Type 4	470	56.930	58.000	1.070	From: SG15, Ø: 100, IL: 56.930 From: SG21, Ø: 100, IL: 56.930 From: FW10A, Ø: 100, IL: 56.930	470 diameter B125 cover		E: 384755.628 N: 400270.197
FW10A	Type 4	470	57.030	58.000	0.970	From: SVP, Ø: 100, IL: 57.030	470 diameter B125 cover		E: 384757.473 N: 400273.758
FW11	Type 2	1200	56.559	58.000	1.441	From: FW10, Ø: 100, IL: 56.609	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384749.420 N: 400257.954
FW12	Type 4	470	56.928	58.000	1.072	From: SG14, Ø: 100, IL: 56.928 From: SG10, Ø: 100, IL: 56.928	470 diameter B125 cover		E: 384760.964 N: 400252.976
FW13	Type 4	470	56.928	58.000	1.072	From: SG16, Ø: 100, IL: 56.928	470 diameter B125 cover		E: 384762.735 N: 400252.108
FW14	Type 4	470	56.928	58.000	1.072	From: SVP, Ø: 100, IL: 56.928	470 diameter B125 cover		E: 384768.956 N: 400248.522
FW15	Type 4	470	56.928	58.000	1.072	From: SG9, Ø: 100, IL: 56.928 From: SG12, Ø: 100, IL: 56.928	470 diameter B125 cover		E: 384790.803 N: 400237.346
FW16	Type 2	1200	55.634	58.000	2.366	From: FW11, Ø: 150, IL: 55.634 From: FW09, Ø: 150, IL: 55.634	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384795.001 N: 400234.638
FW17	Type 4	470	56.928	58.000	1.072	From: SG23, Ø: 100, IL: 56.928	470 diameter B125 cover		E: 384793.474 N: 400230.043
FW18	Type 2	1200	55.328	57.780	2.452	From: FW16, Ø: 150, IL: 55.328 From: SVP, Ø: 100, IL: 56.680	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	SVP to backdrop	E: 384777.480 N: 400200.387
FW19	Type 2	1200	54.931	57.510	2.579	From: FW18, Ø: 150, IL: 54.931	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384754.784 N: 400152.044
FW20	Type 4	470	56.335	57.400	1.065	From: SB1, Ø: 100, IL: 56.385 From: SB2, Ø: 100, IL: 56.385	470 diameter B125 cover	Incoming connection SB1 to have swept bend	E: 384793.731 N: 400077.576

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FW21	Type 2	1200	56.257	57.400	1.143	From: FW20, Ø: 150, IL: 56.257	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384796.350 N: 400082.696
FW22	Type 4	470	56.330	57.400	1.070	From: SB13, Ø: 100, IL: 56.330	470 diameter B125 cover		E: 384776.584 N: 400092.133
FW23	Type 4	470	56.330	57.400	1.070	From: SB6, Ø: 100, IL: 56.330 From: SVP, Ø: 100, IL: 56.330	470 diameter B125 cover		E: 384756.122 N: 400108.599
FW24	Type 4	470	56.330	57.400	1.070	From: SVP, Ø: 100, IL: 56.330	470 diameter B125 cover		E: 384749.168 N: 400106.157
FW25	Type 4	470	56.330	57.400	1.070	From: SVP, Ø: 100, IL: 56.330	470 diameter B125 cover		E: 384744.519 N: 400108.535
FW26	Type 2	1200	54.614	57.300	2.686	From: FW19, Ø: 150, IL: 54.614 From: SVP, Ø: 150, IL: 56.400	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	FW21 and SVP to backdrop	E: 384737.115 N: 400112.996
FW27	Type 4	470	56.330	57.400	1.070	From: SB15, Ø: 100, IL: 56.330 From: SB10, Ø: 100, IL: 56.330 From: FW27A, Ø: 100, IL: 56.330	470 diameter B125 cover		E: 384727.143 N: 400086.048
FW27A	Type 4	470	56.340	57.400	1.060	From: SVP, Ø: 100, IL: 56.340	470 diameter B125 cover		E: 384727.352 N: 400086.801
FW28	Type 4	470	56.350	57.400	1.030	From: SVP, Ø: 100, IL: 56.350	470 diameter B125 cover		E: 384791.199 N: 400011.505
FW29	Type 4	470	55.756	57.300	1.544	From: FW28, Ø: 100, IL: 55.756	470 diameter B125 cover		E: 384794.067 N: 400034.936
FW30	Type 4	470	55.483	57.356	1.873	From: FW29, Ø: 100, IL: 55.533 From: SVP, Ø: 100, IL: 55.533 From: SVP, Ø: 100, IL: 55.533	470 diameter B125 cover		E: 384786.116 N: 400039.003
FW31	Type 4	470	56.320	57.400	1.080	From: SB17, Ø: 100, IL: 56.320 From: SB18, Ø: 100, IL: 56.320 From: SB19, Ø: 100, IL: 56.320	470 diameter B125 cover		E: 384780.446 N: 400038.958
FW32	Type 4	470	56.320	57.350	1.030	From: SB3, Ø: 100, IL: 56.320 From: SB4, Ø: 100, IL: 56.320	470 diameter B125 cover		E: 384784.413 N: 400049.117
FW33	Type 2	1200	55.398	57.400	2.002	From: FW32, Ø: 150, IL: 56.398 From: FW31, Ø: 100, IL: 56.448 From: FW30, Ø: 150, IL: 55.398	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	FW32 and FW31 to backdrop. Angle of FW32 to be aligned with direction of flow.	E: 384781.556 N: 400041.336
FW34	Type 2	1200	55.182	57.400	2.218	From: FW33, Ø: 150, IL: 55.182 From: SB23, Ø: 100, IL: 56.300	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	SB23 to backdrop	E: 384766.106 N: 400049.239
FW35	Type 4	470	56.400	57.400	1.000	From: SB9, Ø: 100, IL: 56.400 From: SB12, Ø: 100, IL: 56.400	470 diameter B125 cover		E: 384752.935 N: 400056.531
FW36	Type 4	470	56.300	57.400	1.100	From: SB21, Ø: 100, IL: 56.300 From: SVP, Ø: 100, IL: 56.300	470 diameter B125 cover		E: 384737.879 N: 400064.233
FW37	Type 4	470	56.400	57.400	1.000	From: SB16, Ø: 100, IL: 56.400 From: SB14, Ø: 100, IL: 56.400	470 diameter B125 cover	Incoming connections to have swept bend	E: 384729.310 N: 400068.658
FW38	Type 2	1200	54.291	57.060	2.769	From: FW26, Ø: 150, IL: 54.291 From: FW34, Ø: 150, IL: 54.291	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384717.276 N: 400074.217
FW39	Type 2	1200	54.235	56.681	2.446	From: FW38, Ø: 150, IL: 54.235	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	As-built information provided by Wates	E: 384712.609 N: 400068.947

UU Foul Manhole	Existing	Existing	54.031	55.921	1.890	From: FW38, Ø: 150, IL: 54.031	Existing		E: 384688.861 N: 400069.510
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Note:
Due to predicted settlement in the ground, all incoming and outgoing connections to manholes to have 2 no. 300mm rocker pipes to provide greater flexibility.

Note:
All below slab drainage to be 100mmØ

Note:
Cover levels are based on Morgan's earthworks model T9759 A01 RevB. Received 23/07/18

Note:
Foul pop-ups based on Patrick Parsons mark-ups received 01/10/2018 and Patrick Parsons drawings:
WTNW-BCM-01-00-DR-P-0002 - C1
WTNW-BCM-02-00-DR-P-0002 - C1
WTNW-BCM-01-00-DR-P-0022 - C1
WTNW-BCM-02-00-DR-P-0022 - C1

- General**
- This drawing is to be read in conjunction with all other contract drawings and the Drainage Specification document 382220-MMD-CH-00-D-D-0004.
 - All dimensions are in millimetres unless otherwise noted.
- Setting out**
- All levels are given in metres Above Ordnance Datum (AOD).
 - All co-ordinates and setting out information are to the Ordnance Survey National Grid.

- Existing drainage infrastructure**
- Existing sewerage infrastructure, ground floor penetration and flow rates advised by others. No guarantee can be given as to accuracy or completeness.
 - Invert levels, dimensions and locations of existing sewers and manholes affecting the works to be verified and assessed for suitability prior to commencement, particularly at points of connection.
 - Flows and levels in existing sewers, land drains and watercourses to be maintained throughout the contract.
 - No existing sewers to be abandoned without engineer's approval.
 - Existing sewers to be abandoned are to be 'grubbed up' or filled with PFA grout in accordance with the specification
 - If applicable, surface water drainage infrastructure designed to accommodate temporary diversions (combined drainage) to be cleaned and made suitable for surface water only after temporary diversions are abandoned.

- Pipes and manholes**
- All pipes below buildings and external to buildings with less than 1.20m cover to have 150mm min. concrete surround, to BS 8500, Mix ST4.
 - All remaining underground pipework to be on Class S bedding.
 - All pipework in manholes to be "soffit level" unless otherwise noted.
 - All pipework in ground below building slab to be Vitrified Clay (extra Strength) with 150mm min. concrete surround (Mix ST4) or similar.
 - All pipework external to buildings up to and including 300mm Ø to be Vitrified Clay (extra strength) or similar.
 - All pipework external to buildings 375mm Ø and above to be Class H reinforced concrete unless otherwise noted.
 - Thermoplastics pipes and fittings (including structured wall pipes) may be substituted for the above materials provided they are acceptable to the relevant approval authority, compliance with the specification is demonstrated, their properties are appropriate for the installed conditions, and their application is not otherwise restricted by the adopting authority. For solid wall pipes, grades appropriate for use without structural calculation shall be used. Pipes shall have internal diameters not less than as stated on the relevant drawings.
 - All branch connections to be made with swept bends in the direction of flow in the main sewer.
 - All pipes are to be solid wall pipes unless otherwise noted as perforated.
 - All manhole covers and frames to be double sealed and lockable.
 - Manhole covers and frames to be BS EN 124, sizes and grades as indicated on manhole schedule.

C09	30.09.19	Final Construction Issue	AS	DC
C08	19.03.19	Additional toilet in both schools	AS	DC
C07	28.01.19	Drainage beneath school amended to avoid clashes	AS	DC
C06	10.01.19	FW02 Coordinates corrected	AS	DC
REV.	DATE	DESCRIPTION	CHK.	APP.

CDM REGULATIONS				
HAZARDS		DATE ADDED	DATE MITGATED	RISK ASSESSMENT DATE
-		-	-	-

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PROJECT TITLE		
Tauheedul North West		
DRAWING TITLE		
Cheetham Hill Below Ground Drainage Foul Water Manhole Schedule		
DRAWN	CHECKED	APPROVED
C. Chau	A. Sims	J. Heeds
DATE		SCALE
30.09.19		N/A
DRAWING NUMBER		REV
382220-MMD-CH-00-DR-D-0007		C09