

Drainage - Proposed SW 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
SW01	Catchpit	1200	56.365	57.626	1.261	From: Macadam, Ø: 150, IL: 56.740	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384846.896 N: 400268.394
SW02	Type 2	1200	56.765	58.000	1.261	From: G_DP01, Ø: TBC, IL: TBC	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements.	E: 384813.281 N: 400256.829
SW03	Type 2	1200	56.330	57.701	1.371	From: SW01, Ø: 225, IL: 56.405 From: SW02, Ø: 225, IL: 56.405 From: MUGA, Ø: 150, IL: 56.480	600 x 600 B400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384835.413 N: 400245.068
SW04	Type 2	1200	56.190	57.914	1.724	From: SW03, Ø: 300, IL: 56.190	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384823.048 N: 400219.951
SW05	Type 2	1200	56.110	58.000	1.890	From: SW04, Ø: 300, IL: 56.110 From: YG, Ø: 100, IL: 56.310	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop	E: 384822.295 N: 400203.935
SW06	Type 2	1200	55.966	57.811	1.845	From: SW05, Ø: 300, IL: 55.966 From: YG, Ø: 100, IL: 56.166	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop	E: 384809.002 N: 400178.331
SW07	Type 2	1200	55.855	57.893	2.038	From: SW06, Ø: 300, IL: 55.855 From: G_DP07, Ø: TBC, IL: TBC From: YG, Ø: 100, IL: 56.055	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop. Vented cover as per Fullflow requirements	E: 384789.018 N: 400188.224
SW08	Type 2	1200	56.880	58.000	1.120	From: YG, Ø: 100, IL: 56.930	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384760.492 N: 400282.989
SW09	Type 2	1200	56.586	57.732	1.146	From: SW08, Ø: 150, IL: 56.586 From: YG, Ø: 100, IL: 56.636	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384747.572 N: 400257.598
SW10	Type 2	1350	56.001	57.911	1.910	From: G_DP02, Ø: TBC, IL: TBC From: SW09, Ø: 150, IL: 56.151	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements	E: 384785.995 N: 400237.726
SW11	Type 2	1200	56.775	57.916	1.141	From: G_DP03, Ø: TBC, IL: TBC From: G_DP04, Ø: TBC, IL: TBC From: G_DP05, Ø: TBC, IL: TBC	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements	E: 384792.301 N: 400232.641
SW12	Type 2	1200	56.215	57.797	1.582	From: SW11, Ø: 225, IL: 56.215 From: G_DP06, Ø: TBC, IL: TBC From: YG Ø: 100, IL: 56.415	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop Vented cover	E: 384784.806 N: 400217.990
SW13	Type 2	1350	55.849	57.676	1.827	From: SW10, Ø: 300, IL: 55.849 From: SW12, Ø: 225, IL: 55.924	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384775.538 N: 400216.681
SW14	Type 2	1350	55.571	57.537	1.966	From: SW13, Ø: 300, IL: 55.721 From: SW07, Ø: 300, IL: 55.721	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384764.979 N: 400200.250
SW15	Type 2	1350	55.397	57.092	1.695	From: SW14, Ø: 450, IL: 55.397	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384733.804 N: 400158.306
SW16	Catchpit	1200	55.732	56.781	1.049	From: MUGA, Ø: 150, IL: 56.032	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384818.646 N: 400086.973
SW17	Type 2	1200	55.957	56.963	1.006	From: SW RE01, Ø: 150, IL: 56.036 From: SW16, Ø: 225, IL: 55.957	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384812.785 N: 400075.566
SW18	Type 2	1200	55.606	57.311	1.705	From: SW17, Ø: 225, IL: 55.681 From: YG, Ø: 100, IL: 55.806 From: YG, Ø: 100, IL: 55.806 From: B_DP01, Ø: TBC, IL: TBC	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements. YG's to backdrop	E: 384771.465 N: 400097.651
SW19	Catchpit	1200	55.985	57.392	1.407	From: MUGA, Ø: 150, IL: 56.360	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384750.004 N: 400122.911
SW20	Type 2	1350	55.385	57.334	1.949	From: SW18, Ø: 300, IL: 55.460 From: SW19, Ø: 225, IL: 55.535 From: YG, Ø: 100, IL: 55.660	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop	E: 384740.610 N: 400114.265
SW21	Catchpit	1350	54.877	56.875	1.998	From: SW15, Ø: 450, IL: 55.252 From: SW20, Ø: 375, IL: 55.301	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384718.985 N: 400117.501
SW22	Type 2	1200	56.335	57.400	1.065	From: B_DP07, Ø: TBC, IL: TBC From: YG, Ø: 100, IL: 56.385	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements	E: 384794.735 N: 400005.442

Drainage - Proposed SW 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
SW23	Type 2	1200	56.226	57.400	1.174	From: SW22, Ø: 150, IL: 56.226 From: YG, Ø: 100, IL: 56.385	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384789.779 N: 399995.694
SW24	Type 2	1200	55.685	57.400	1.715	From: SW23, Ø: 150, IL: 55.760	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384748.303 N: 400016.909
SW25	Type 2	1200	55.643	57.400	1.757	From: B_DP06, Ø: TBC, IL: TBC From: SW24, Ø: 225, IL: 55.643	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements	E: 384751.182 N: 400022.538
SW26	Type 2	1200	55.389	57.400	2.011	From: SW25, Ø: 225, IL: 55.464 From: B_DP03, Ø: TBC, IL: TBC From: B_DP04, Ø: TBC, IL: TBC From: B_DP05, Ø: TBC, IL: TBC	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements	E: 384763.393 N: 400046.407
SW27	Type 2	1350	55.210	57.278	2.031	From: SW26, Ø: 300, IL: 55.285 From: B_DP02, Ø: TBC, IL: TBC	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	Vented cover as per Fullflow requirements. YG to backdrop	E: 384742.060 N: 400057.359
SW28	Type 2	1350	55.110	56.916	1.806	From: YG, Ø: 100, IL: 55.385 From: SW27, Ø: 375, IL: 55.110	600 x 600 B125 cover and frame over 600 x 600 Eccentric opening in cover slab	YG to backdrop	E: 384716.750 N: 400070.267
SW29	Type 2	1200	56.375	57.410	1.035	From: CD03A Ø: 150, IL: 56.450	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384720.849 N: 400254.654
SW30	Type 2	1200	56.095	57.650	1.555	From: RG Ø: 150, IL: 56.170 From: RG Ø: 150, IL: 56.170	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384762.346 N: 400227.170
SW31	Type 2	1200	55.749	57.378	1.629	From: SW29, Ø: 225, IL: 55.824 From: SW30, Ø: 225, IL: 55.824	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384746.994 N: 400201.803
SW32	Type 2	1200	55.495	56.988	1.493	From: SW31, Ø: 300, IL: 55.495 From: RG, Ø: 150, IL: 55.645	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384730.369 N: 400156.399
SW32A	Type 2	1200	55.310	56.850	1.540	From: SW32, Ø: 300, IL: 55.310	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384716.748 N: 400119.313
SW33	Type 2	1200	55.117	56.522	1.405	From: SW32A, Ø: 300, IL: 55.117	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384703.825 N: 400081.863
SW34	Catchpit	1500	54.694	56.598	1.904	From: SW33, Ø: 300, IL: 55.069 From: SW28, Ø: 375, IL: 55.069 From: SW21, Ø: 525, IL: 55.069	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384706.139 N: 400076.457
SW35	Type 2	1200	55.250	56.393	1.143	From: KD02, Ø: 150, IL: 55.400	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384728.831 N: 399991.084
SW36	Type 2	1200	55.010	56.067	1.057	From: SW35, Ø: 300, IL: 55.010 From: KD01, Ø: 150, IL: 55.160 From: KD02, Ø: 150, IL: 55.160	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab		E: 384697.017 N: 400027.117
SW37	ESS to specify	300	54.886	56.688	1.802	Access Inspection & Culvert Unit IL: 54.886	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	Chamber to meet Pluvial Cube maintenance requirements.	E: 384773.754 N: 399965.422
SW38	ESS to specify	300	54.886	56.997	2.111	Access Inspection & Culvert Unit IL: 54.886	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	Chamber to meet Pluvial Cube maintenance requirements.	E: 384743.391 N: 399968.362
SW39	Catchpit	1200	54.586	56.436	1.850	From: Attenuation, Ø: 450, IL: 54.886	600 x 600 D400 cover and frame over 600 x 600 Eccentric opening in cover slab	Catchpit invert level 300mm below outgoing pipe	E: 384709.917 N: 400039.144
SW40	Type 2	1500	54.851	56.336	1.485	From: SW34, Ø: 600, IL: 54.901 From: SW36, Ø: 300, IL: 54.901 From: SW39, Ø: 450, IL: 54.851	600 x 600 D400 cover and frame over 600 x 600 Central opening in cover slab	Vortex flow control chamber	E: 384698.566 N: 400040.080

MCC SW Existing	Existing	Existing	54.585	56.295	1.710	From: SW40, Ø: 225, IL: 54.680	Existing		E: 384672.909 N: 400051.634
-----------------	----------	----------	--------	--------	-------	--------------------------------	----------	--	--------------------------------

Drainage - Pr. SW ACO Channel Drain Schedule				
Channel Drainage Reference	Length (m)	Width (mm)	Depth(mm)	Cover Class
CD01	70.0	150	235	B125
CD02	52.0	150	185	B125
CD03	43.0	200	290	D400
CD03A	12.0	150	185	D400
CD04	9.0	150	285	D400

Drainage - Pr. SW Kerb Drain Schedule				
Channel Drainage Reference	Length (m)	Width (mm)	Depth(mm)	Cover Class
KD01	82.2	100	255	D400
KD02	110.4	100	455	D400

Oil Separator Specifications (See Note 1 below)			
Reference	Separator Type	Req. Catchment Area (m2)	Invert Level of Inlet (mAOD)
OS-01	By-pass	4700	55.150
OS-02	By-pass	4000	54.985

Note 1: The contractor must ensure that the size of the inlet and outlet pipework for the supplied unit(s) is not smaller than the pipe run on which it is situated (see General Arrangement - Plan drawing).

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

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.

C10	30.09.19	Final Construction Issue	AS	DC
C09	19.03.19	MUGA and Macadam added	AS	DC
C08	20.12.18	Removed pitch drainage	AS	DC
C07	11.10.18	SW33 coordinates corrected	AS	DC
REV.	DATE	DESCRIPTION	CHK.	APP.

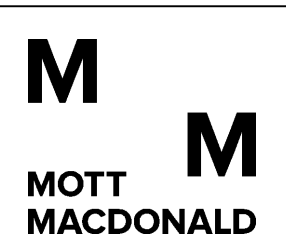
CDM REGULATIONS			
HAZARDS	DATE ADDED	DATE MITIGATED	RISK ASSESSMENT DATE
-	-	-	-

ISSUED FOR
Construction
CLIENT
Education Funding Agency



Wates Construction
4th Floor
The Royals
353 Altrincham Road
Sharston
Manchester
M22 4BJ
T +44 (0) 161 946 8800
www.wates.co.uk





Spring Bank House,
33 Stamford Street
Altrincham, WA14 1ES
United Kingdom
T +44 (0) 161 926 4000
F +44 (0) 161 926 4100
www.mottmac.com

PROJECT TITLE		
Tauheedul North West		
DRAWING TITLE		
Cheetham Hill Below Ground Drainage Surface 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-0005		C10