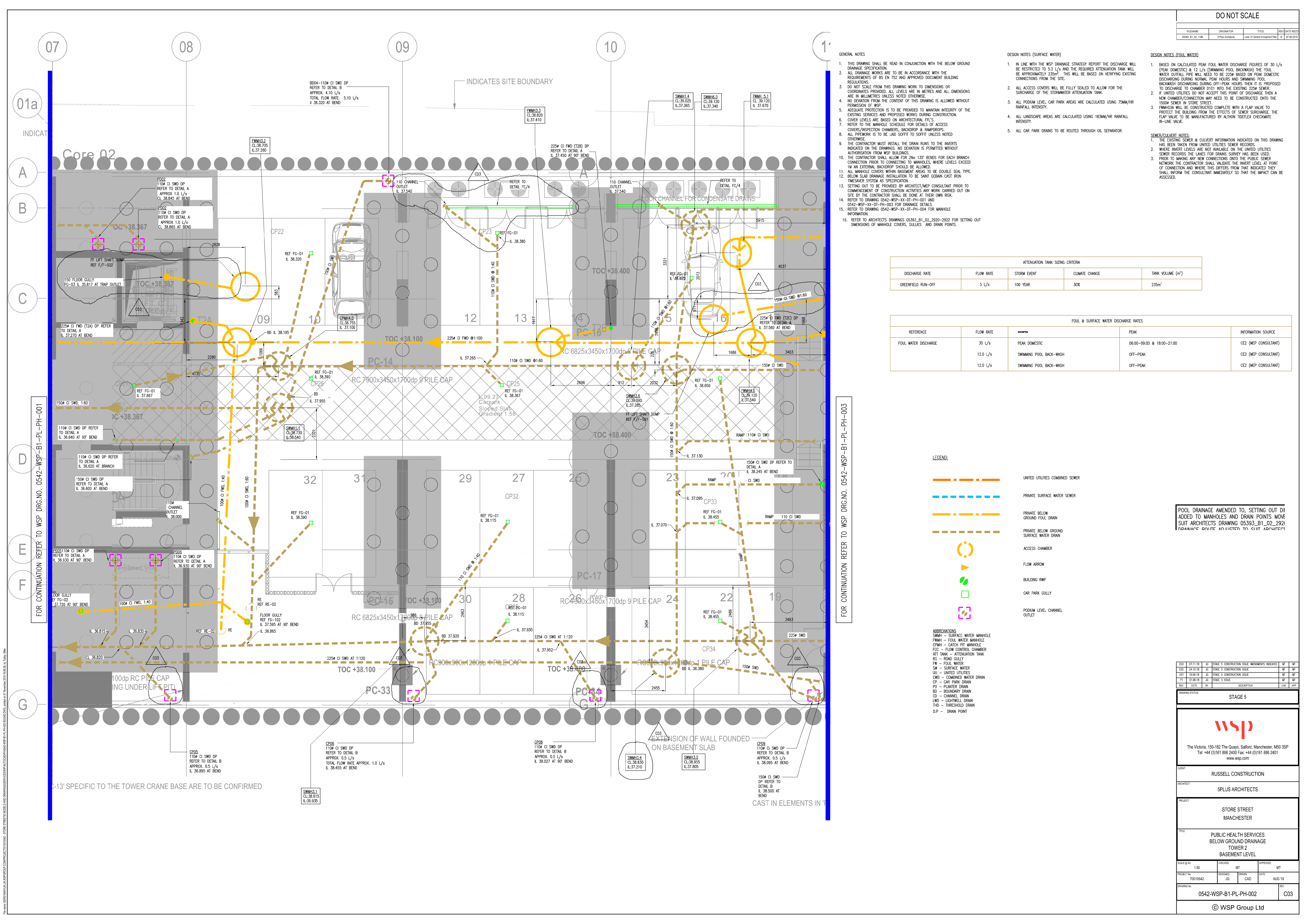




GENERAL NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE BELOW GROUND DRAINAGE SPECIFICATION.
2. ALL DRAINAGE WORKS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF BS EN 752 AND APPROVED DOCUMENT BUILDING REGULATIONS.
3. DO NOT SCALE FROM THIS DRAWING WORK TO DIMENSIONS OR COORDINATES PROVIDED. ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. NO DEVIATION FROM THE CONTENT OF THIS DRAWING IS ALLOWED WITHOUT PERMISSION OF WSP.
5. ADEQUATE PROTECTION IS TO BE PROVIDED TO MAINTAIN INTEGRITY OF THE EXISTING SERVICES AND PROPOSED WORKS DURING CONSTRUCTION.
6. COVER LEVELS ARE BASED ON ARCHITECTURAL FF'S.
7. REFER TO THE MANHOLE SCHEDULE FOR DETAILS OF ACCESS COVERS/INSPECTION CHAMBERS, BACKDROP & RAMPROPS.
8. ALL PIPEWORK IS TO BE LAD SUFFIT TO SUFFIT UNLESS NOTED OTHERWISE.
9. THE CONTRACTOR MUST INSTALL THE DRAIN RUNS TO THE INVERTS INDICATED ON THE DRAWINGS. NO DEVIATION IS PERMITTED WITHOUT AUTHORISATION FROM WSP BUILDINGS.
10. THE CONTRACTOR SHALL ALLOW FOR 240° 135° BENDS FOR EACH BRANCH CONNECTION PRIOR TO CONNECTING TO MANHOLES, WHERE LEVELS EXCEED 1M AN EXTERNAL BACKDROP SHOULD BE ALLOWED.
11. ALL MANHOLE COVERS WITHIN BASEMENT AREAS TO BE DOUBLE SEAL TYPE.
12. BELOW SLAB DRAINAGE INSTALLATION TO BE SALT COBAIN CAST IRON TIMESAVER SYSTEM AS SPECIFICATION.
13. SETTING OUT TO BE PROVIDED BY ARCHITECT/MEP CONSULTANT PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES ANY WORK CARRIED OUT ON SITE BY THE CONTRACTOR SHALL BE DONE AT THEIR OWN RISK.
14. REFER TO DRAWING 0542-WSP-B1-PL-PH-001 AND 0542-WSP-B1-PL-PH-003 FOR DRAINAGE DETAILS.
15. REFER TO DRAWING 0542-WSP-B1-PL-PH-004 FOR MANHOLE INFORMATION.
16. REFER TO ARCHITECTS DRAWINGS 05393_B1_02_2920-2922 FOR SETTING OUT DIMENSIONS OF MANHOLE COVERS, GULLIES AND DRAIN POINTS.

DESIGN NOTES (SURFACE WATER)

1. IN LINE WITH THE WSP DRAINAGE STRATEGY REPORT THE DISCHARGE WILL BE RESTRICTED TO 5.0 L/s AND THE REQUIRED ATTENUATION TANK WILL BE APPROXIMATELY 235m³. THIS WILL BE BASED ON VERIFYING EXISTING CONNECTIONS FROM THE SITE.
2. ALL ACCESS COVERS WILL BE FULLY SEALED TO ALLOW FOR THE SURCHARGE OF THE STORMWATER ATTENUATION TANK.
3. ALL PODIUM LEVEL CAR PARK AREAS ARE CALCULATED USING 75MM/HRR RAINFALL INTENSITY.
4. ALL LANDSCAPE AREAS ARE CALCULATED USING 183MM/HRR RAINFALL INTENSITY.
5. ALL CAR PARK DRAINS TO BE ROUTED THROUGH OIL SEPARATOR.

DESIGN NOTES (FOUL WATER)

1. BASED ON CALCULATED PEAK FOUL WATER DISCHARGE FIGURES OF 30 L/s (PEAK DOMESTIC) & 12 L/s (SWIMMING POOL BACKWASH) THE FOUL WATER OUTFALL PIPE WILL NEED TO BE 225mm BASED ON PEAK DOMESTIC DISCHARGE DURING NORMAL PEAK HOURS AND SWIMMING POOL BACKWASH DISCHARGE DURING OFF-PEAK HOURS THEN IT IS PROPOSED TO DISCHARGE TO CHAMBER 0101 INTO THE EXISTING 225mm SEWER.
2. IF UNITED UTILITIES DO NOT ACCEPT THIS POINT OF DISCHARGE THEN A NEW CHAMBER/CONNECTION MAY NEED TO BE CONSTRUCTED ONTO THE 1500mm SEWER IN STORE STREET.
3. FWH010A WILL BE CONSTRUCTED COMPLETE WITH A FLAP VALVE TO PROTECT THE BUILDING FROM THE EFFECTS OF SEWER SURCHARGE. THE FLAP VALVE TO BE MANUFACTURED BY ALTHON TIDEFLUX CHECKMATE IN-LINE VALVE.

SEWER/CULVERT NOTES:

1. THE EXISTING SEWER & CULVERT INFORMATION INDICATED ON THIS DRAWING HAS BEEN TAKEN FROM UNITED UTILITIES SEWER RECORDS.
2. WHERE INVERT LEVELS ARE NOT AVAILABLE ON THE UNITED UTILITIES SEWER RECORDS THE LINES FOR DRAINAGE SURVEY HAS BEEN USED.
3. PRIOR TO MAKING ANY NEW CONNECTIONS ONTO THE PUBLIC SEWER NETWORK THE CONTRACTOR SHALL VALIDATE THE INVERT LEVEL AT POINT OF CONNECTION AND WHERE THIS DIFFERS FROM THAT INDICATED THEY SHALL INFORM THE CONSULTANT IMMEDIATELY SO THAT THE IMPACT CAN BE ASSESSED.

ATTENUATION TANK SIZING CRITERIA				
DISCHARGE RATE	FLOW RATE	STORM EVENT	CLIMATE CHANGE	TANK VOLUME (m³)
GREENFIELD RUN-OFF	5 L/s	100 YEAR	30%	235m³

FOUL & SURFACE WATER DISCHARGE RATES				
REFERENCE	FLOW RATE	SCENARIO	PEAK	INFORMATION SOURCE
FOUL WATER DISCHARGE	30 L/s	PEAK DOMESTIC	06:00-09:00 & 18:00-21:00	CE2 (MEP CONSULTANT)
	12.0 L/s	SWIMMING POOL BACK-WASH	OFF-PEAK	CE2 (MEP CONSULTANT)
	12.0 L/s	SWIMMING POOL BACK-WASH	OFF-PEAK	CE2 (MEP CONSULTANT)

LEGEND:

- UNITED UTILITIES COMBINED SEWER
- PRIVATE SURFACE WATER SEWER
- PRIVATE BELOW GROUND FLOOR DRAIN
- PRIVATE BELOW GROUND SURFACE WATER DRAIN
- ACCESS CHAMBER
- FLOW ARROW
- BUILDING RWP
- CAR PARK GULLY
- PODIUM LEVEL CHANNEL OUTLET

- ABBREVIATIONS
- SMWH - SURFACE WATER MANHOLE
 - FWMH - FOUL WATER MANHOLE
 - CPMH - CATCH PIT MANHOLE
 - FOC - FLOW CONTROL CHAMBER
 - ATT TANK - ATTENUATION TANK
 - RC - ROAD DRAIN
 - FW - FOUL WATER
 - SW - SURFACE WATER
 - UU - UNITED UTILITIES
 - CWD - COMBINED WATER DRAIN
 - CP - CAR PARK DRAIN
 - PD - PLANTER DRAIN
 - BD - BOUNDARY DRAIN
 - CD - CHANNEL DRAIN
 - LWD - LIGHTWELL DRAIN
 - THD - THRESHOLD DRAIN
 - DP - DRAIN POINT

POOL DRAINAGE AMENDED TO, SETTING OUT DII ADDED TO MANHOLES AND DRAIN POINTS MOVE SUIT ARCHITECTS DRAWING 05393_B1_02_2921 DRAINAGE POINT ADJUSTED TO SUIT ARCHITECTS

REV	DATE	BY	DESCRIPTION	CHK	APP
001	07.11.18	JS	STAGE 5 CONSTRUCTION ISSUE AMENDMENTS INDICATED	MT	MT
002	24.01.19	JS	STAGE 5 CONSTRUCTION ISSUE	MT	MT
003	10.09.18	JS	STAGE 5 CONSTRUCTION ISSUE	MT	MT
004	31.08.18	JS	STAGE 5 ISSUE	MT	MT

DRAWING STATUS: STAGE 5

The Victoria, 150-182 The Quays, Salford, Manchester, M50 3SP
Tel: +44 (0)161 886 2400 Fax: +44 (0)161 886 2401
www.wsp.com

CLIENT: RUSSELL CONSTRUCTION

ARCHITECT: SPLUS ARCHITECTS

PROJECT: STORE STREET MANCHESTER

TITLE: PUBLIC HEALTH SERVICES BELOW GROUND DRAINAGE TOWER 2 BASEMENT LEVEL

SCALE & NO: 1:50

CHECKED: MT

APPROVED: MT

DESIGNED: JG

DRAWN: CAD

DATE: AUG '18

PROJECT NO: 70101042

DRAWING NO: 0542-WSP-B1-PL-PH-002

REV: C03

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