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DO NOT SCALE

NOTES

SEWER AND DRAIN TESTING

ALL SEWERS AND DRAINS CONSTRUCTED AS PART OF THE CONTRACT SHALL BE TESTED AFTER THEY ARE JOINTED AND BEFORE ANY CONCRETE OR BACKFILLING IS COMMENCED, OTHER THAN SUCH AS MAY BE NECESSARY FOR STRUCTURAL STABILITY WHILST UNDER TEST

TESTING SHALL BE IN ACCORDANCE WITH SfA AND BS EN 1610

TESTING OF PIPES UP TO AND INCLUDING 750mm NOMINAL DIAMETER SHALL BE BY MEANS OF AN AIR OR WATER TEST.
FOR PIPES LARGER THAN 750mm NOMINAL DIAMETER A VISUAL EXAMINATION SHALL BE CARRIED OUT

A FURTHER TEST SHALL BE CARRIED OUT AFTER THE BACKFILLING IS COMPLETE

ADDITIONAL TESTING MAYBE REQUIRED AS INSTRUCTED BY THE WATER COMPANY AND/OR HIGHWAYS INSPECTOR/REPRESENTATIVE

AIR TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH SfA SECTION 5.7.4 AND BS EN 1610

WATER TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH SfA SECTION 5.7.5 AND BS EN 1610

VISUAL INSPECTIONS (CCTV SURVEY) SHALL BE CARRIED OUT BY A QUALIFIED AND APPROVED CONTRACTOR, AND IN ACCORDANCE WITH THE "WSA/FWR MODEL CONTRACT DOCUMENT FOR SEWER CONDITION INSPECTIONS"

THE FOUL WATER RISING MAIN SHALL BE PRESSURE TESTED BY THE M&E CONTRACTOR AND CERTIFICATION PROVIDED TO THE WATER COMPANY
A REPRESENTATIVE FROM THE WATER COMPANY MAY NEED TO BE PRESENT DURING THE TESTING THE CONTRACTOR SHALL LIASE WITH THE WATER COMPANY INSPECTOR AS TO THERE REQUIREMENTS

KEY

- EXISTING FW DRAINS /SEWERS
- EXISTING SW DRAINS/SEWERS
- PROPOSED FW DRAINS/SEWERS
- PROPOSED SW DRAINS/SEWERS
- PROPOSED FW MANHOLE
- PROPOSED SW MANHOLE
- DRAINS TO BE ABANDONED
- RWP (***Ø) — PROPOSED RAINWATER DOWN PIPE SIZE & LOCATION TBC, BY OTHERS
- RG — PROPOSED TRADITIONAL TYPE ROAD GULLY WITH 150Ø OUTLET PIPE
- WPC — PROPOSED WASTE PIPE CONNECTION SIZE & LOCATION TBC, BY OTHERS (* DENOTES WC CONNECTED)
- PROPOSED DRAINAGE CHANNEL SPECIFICATION AS NOTED ON PLAN LAYOUT
- PROPOSED KERB DRAINAGE SYSTEM SPECIFICATION AS NOTED ON PLAN LAYOUT

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP IS TO COMPLY WITH JPG CONSULTANTS STANDARD SPECIFICATION & ALL RELEVANT BRITISH & EUROPEAN STANDARDS.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, M & E CONSULTANTS AND JPG CONSULTANTS DRAWINGS.

3. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO COMMENCEMENT OF WORKS.

DRAINAGE NOTES

1. ALL BUILDING DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN 752:2008 DRAINAGE AND SEWER SYSTEMS OUTSIDE BUILDINGS, THE CURRENT BUILDING REGULATIONS AND THE LOCAL AUTHORITY BUILDING CONTROL SPECIFICATIONS AND REQUIREMENTS.

2. ANY DRAINAGE TO BE PUT FORWARD FOR ADOPTION EITHER WITHIN THE SITE OR OUTSIDE SHALL BE CONSTRUCTED TO SEWERS FOR ADOPTION LATEST EDITION AND ANY SPECIFIC REQUIREMENTS OF THE ADOPTING SEWERAGE/WATER AUTHORITY.

3. THE LOCATION, SIZE AND DEPTH OF ALL EXISTING DRAINS/SEWERS AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS ON SITE. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

4. 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 UTILITY COMPANIES.

5. THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN OFF INTO EXCAVATIONS 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.

6. ALL LEVELS AND DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

7. THE CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS IN LINE WITH CURRENT LEGISLATION WHEN WORKING IN/NEAR CONFINED SPACES, DEEP EXCAVATIONS AND MACHINERY.

8. THE CONTRACTOR SHALL ALLOW FOR OBTAINING ALL APPROVALS FROM THE RELEVANT AUTHORITIES WHEN WORKING IN THE PUBLIC HIGHWAY AND ON THE SEWERAGE SYSTEM.

9. THE CONTRACTOR SHALL SUITABLY PROTECT PEDESTRIANS AND VEHICLES FROM WORKING AREAS.

10. ALL PIPES SHALL BE LAID WITH LEVEL SOFFITS AND ALL MANHOLE/INSPECTION CHAMBER INVERT LEVELS SHOWN ARE FOR THE OUT GOING PIPE (UNLESS OTHERWISE INDICATED IN THE DRAWING).
PIPE RUNS SHALL BE LAID TO THE INVERT LEVELS AS DETAILED ON THE CONTRACT DRAWINGS.
(NOTE THAT ALL PIPE GRADIENTS INDICATED ON THE DRAWINGS ARE APPROXIMATE).

11. ALL RAINWATER PIPES AND INTERNAL FOUL DRAIN CONNECTIONS POINTS ARE TO BE SIZED & POSITIONED AS SHOWN ON THE ARCHITECTS DRAWINGS.
THE CONTRACTOR SHALL SUPPLY SUITABLE ADAPTORS AT PROPOSED GROUND LEVELS OR FINISHED FLOOR LEVEL TO ALLOW CONNECTION OF THE ABOVE GROUND DRAINAGE SYSTEM.
(DETAILS OF THE ABOVE GROUND DRAINAGE SYSTEM AND ADAPTORS ALL BY OTHERS).

12. UPON COMPLETION OF THE DRAINAGE WORKS THE CONTRACTOR SHALL CLEAN ALL DRAIN RUNS BY JETTING AND REMOVE ALL DEBRIS FROM SITE.
NO DEBRIS SHALL BE PERMITTED TO ENTER THE PUBLIC SEWER AND/OR WATERCOURSE SYSTEM.
ONCE THE DRAINAGE SYSTEM HAS BEEN FULLY CLEANED OUT A CCTV CAMERA CONDITION SURVEY SHALL BE UNDERTAKEN TO ALL CONSTRUCTED DRAINAGE AND SEWER PIPES WITH THE FOOTAGE ISSUED TO THE ENGINEER FOR VIEW.
THE AS BUILT INVERT AND COVER LEVELS SHALL BE RECORDED BY THE CONTRACTOR AND PASSED ON

TO THE ENGINEER FOR REVIEW.

REV	DESCRIPTION	DATE	BY
H	DRAWING UPDATE IN LINE WITH CONTRACTORS PROPOSAL AND VE MEETING ON 01.05.2019	10.05.2019	JDM
G	UPDATED TO SUIT KPP COMMENTS (RECEIVED 05.04.19)	15.04.19	JH
F	SUBSTATION ROOF DRAINAGE ADDED AND DUPLICATE MH REF. AMENDED	03.04.2019	JDM
E	CONSTRUCTION ISSUE	28.03.2019	JDM
D	CONTRACT ISSUE	28.03.2019	KR
C	COMMENTS INCORPORATED	22.01.2019	KR
B	LAYOUT AMENDED	21.01.2019	KR
A	INITIAL ISSUE	24.08.2018	JDM

Job Title
WENTWORTH WAY,
TANKERSLEY

Drawing Title
FW AND SW DRAINAGE LAYOUT
UNIT 4

CONSTRUCTION

Architect
KPP

JPG
www.jpg.group
Leeds: 0113 263 1155 | London: 020 7947 4148

Checked	Date	Scale		Drawn
	AUG 2018	1:200	A0	JDM

Drawing No 4776-4-D1 H

27,500 ft² EXPANSION

UNIT 3
FFL 165.000m

UNIT 4
FFL 167.000m

SUB-STATION
FFL 165.165m

SWMH-407
CL166.500
IL164.230 (300Ø)
Dp. 2.270m
SIZE 1500Ø PCC

SWMH-408
CL165.920
IL164.470 (150Ø)
IL164.395 (225Ø)
Dp. 1.525m
SIZE 1200Ø PCC

SWMH-409
CL165.920
IL164.330 (150Ø)
IL164.275 (225Ø)
Dp. 1.645m
SIZE 1500Ø PCC

SWMH-411
CL165.920
IL164.275 (150Ø)
IL164.200 (225Ø)
IL164.125 (300Ø)
Dp. 1.795m
SIZE 1500Ø PCC

SWMH-412
CL166.060
IL163.975 (300Ø)
IL163.900 (375Ø)
Dp. 2.160m
SIZE 1800Ø PCC

SWMH-410
CL165.920
IL164.470 (150Ø)
IL164.395 (225Ø)
Dp. 1.525m
SIZE 1200Ø PCC

SWMH-301
CL164.850
IL163.850 (225Ø)
SUMP 163.350m
Dp. 1.500m
SIZE 1200Ø PCC

FWMH-305
CL164.850
IL163.550 (150Ø)
Dp. 1.300m
SIZE 1200Ø PCC

FWMH-303
CL164.850
IL163.900 (100Ø)
IL163.850 (150Ø)
Dp. 1.000m
SIZE 450Ø PPIC

SWMH-302
CL164.850
IL163.200 (225Ø)
SUMP 162.700m
Dp. 2.150m
SIZE 1500Ø PCC

SWMH-501
CL165.125
IL163.925 (100Ø)
Dp. 1.200m
SIZE 450Ø PPIC

SWMH-413
CL165.950
IL163.875 (300Ø)
IL163.800 (375Ø)
Dp. 2.215m
SIZE 1800Ø PCC

SWMH-406
CL165.980
IL164.375 (225Ø)
IL164.300 (300Ø)
Dp. 1.680m
SIZE 1500Ø PCC

FWMH-407
CL166.425
IL165.325 (100Ø)
Dp. 1.100m
SIZE 450Ø PPIC

FWMH-408
CL165.900
IL164.700 (100Ø)
Dp. 1.200m
SIZE 450Ø PPIC

SWMH-405
CL166.045
IL164.595 (150Ø)
IL164.520 (225Ø)
Dp. 1.525m
SIZE 1200Ø PCC

SWMH-404
CL166.725
IL165.240 (300Ø)
SUMP 164.740m
Dp. 1.985m
SIZE 1500Ø PCC

FWMH-401
CL166.850
IL165.850 (100Ø)
Dp. 1.000m
SIZE 450Ø PPIC

FWMH-402
CL166.850
IL165.750 (100Ø)
Dp. 1.100m
SIZE 450Ø PPIC

SWMH-403
CL166.850
IL165.650 (100Ø)
IL165.550 (150Ø)
Dp. 1.300m
SIZE 1200Ø PCC

FWMH-406
CL166.850
IL165.550 (100Ø)
IL165.500 (150Ø)
Dp. 1.350m
SIZE 1200Ø PCC

FWMH-404
CL166.850
IL165.850 (100Ø)
Dp. 1.000m
SIZE 450Ø PPIC

FWMH-405
CL166.850
IL165.690 (100Ø)
Dp. 1.160m
SIZE 450Ø PPIC

SWMH-403
CL166.850
IL165.390 (300Ø)
Dp. 1.460m
SIZE 1500Ø PCC

SWMH-402
CL166.850
IL165.625 (225Ø)
IL165.550 (300Ø)
SUMP 165.050m
Dp. 1.800m
SIZE 1500Ø PCC

SWMH-401
CL166.850
IL165.850 (225Ø)
SUMP 165.350m
Dp. 1.500m
SIZE 1200Ø PCC

FRS-401
CLASS 1 FULL RETENTION SEPARATOR
CONDER CRS70s/11 C/W HIGH LEVEL HYDRO CARBON ALARM
IL164.095 (300Ø) IN
IL164.045 (300Ø) OUT
DRAINED AREA = 3435.0m2 MIN.

BSP-401
CLASS 1 BY-PASS SEPARATOR
CONDER CNSB3s/21 C/W HIGH LEVEL HYDRO CARBON ALARM
IL164.490 (150Ø) IN
IL164.440 (150Ø) OUT
DRAINED AREA = 1395.0m2 MIN.

ALL PIPE CONNECTION FROM DRAINAGE CHANNELS AND GULLIES SHALL BE 150Ø PIPES AT A MINIMUM GRADIENT OF 1:100 WITH CLASS Z BEDDING UNO, ON THE DRAWING

ALL PIPE CONNECTIONS FROM WPC'S TO FIRST CHAMBER SHALL BE 100Ø AT 1:40 MIN. WITH CLASS S BEDDING BENEATH THE BUILD AND CLASS Z UNDER EXTERNALS WHERE COVER IS LESS THAN 1.20m UNO. ON THE DRAWING
(LOCATION OF WPC' TO BE CONFIRMED BY THE ARCHITECT AND TENANT (NOTE ADDITIONAL CHAMBERS AND PIPE WORK MAYBE REQUIRED TO SUIT THE TENANTS LAYOUT))

SYPHONIC ROOF DRAINAGE
PIPE FROM THE REST BEND TO THE FIRST CHAMBER TO BE PART OF THE SYPHONIC SYSTEM AND DESIGNED/SIZED BY THE SYPHONIC DRAINAGE MANUFACTURER

SYPHONIC DRAINAGE MANHOLES
COVERS TO BE A 600x600 SQ GULLY GRATE COVER SAINT GOBAIN WATERWAY 2000 OR SIMILAR APPROVED

SRWP DESIGN, LOCATION AND SIZE BY SYPHONIC DRAINAGE DESIGNER/ SUPPLIER IL164.325m

SRWP DESIGN, LOCATION AND SIZE BY SYPHONIC DRAINAGE DESIGNER/ SUPPLIER IL164.335m

SRWP DESIGN, LOCATION AND SIZE BY SYPHONIC DRAINAGE DESIGNER/ SUPPLIER IL166.325m

ALL MANHOLE/CHAMBER COVER LEVELS ARE APPROXIMATE AND SHALL BE ADJUSTED ON SITE TO SUIT THE PROPOSED FINISHED LEVELS

THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY EXISTING LIVE DRAINAGE BE FOUND WITHIN THE SITE BOUNDARY SERVING ADJACENT PROPERTIES

ALL EXISTING DRAINAGE WITHIN THE SITE NOT REQUIRED FOR THE NEW DEVELOPMENT SHALL BE ABANDONED
DRAINS AND SEWER LESS THAN 1.500m DEEP WHICH ARE IN OPEN GROUND SHOULD AS FAR AS IS PRACTICABLE BE FULLY REMOVED
ALL OTHER PIPES SHOULD BE SEALED AT BOTH ENDS AND AT ANY POINT OF CONNECTION, AND BE GROUT FILLED TO ENSURE THAT RATS CANNOT GAIN ACCESS
LARGER PIPES 225Ø OR ABOVE SHOULD BE GROUT FILLED TO PREVENT SUBSIDENCE OR DAMAGE TO BUILDINGS OR SERVICES IN THE EVENT OF COLLAPSE

LOCATION SIZE AND SETTING OUT OF ALL RAINWATER AND WASTE PIPE CONNECTIONS REFER TO THE RELEVANT ARCHITECT'S DRAWING FOR DESIGN PURPOSES THESE HAVE BEEN ASSUMED

SUITABLY SIZED PETROL INTERCEPTORS MUST COMPLY WITH THE REQUIREMENTS OUTLINE IN PPG3 THESE INCLUDE SILT STORAGE CAPACITY AND HIGH LEVEL HYDROCARBON ALARM WIRED BACK TO A MANNED OFFICE

CONNECTIONS FROM WPC TO BE LAID AT 1/40 MINIMUM AND 1/10 MAXIMUM GRADIENTS WHERE CONSTRUCTED UNDER THE BUILDING

ALL EXISTING DRAINAGE LEVELS ARE TO BE CONFIRMED BY THE CONTRACTOR AND THE ENGINEER NOTIFIED BEFORE ANY DRAIN RUNS ARE CONSTRUCTED

EX. S10
CL165.640
IL163.110 (225Ø)
IL162.780 (525Ø)
Dp. 2.860m

EX. S48
CL164.220
IL163.240 (225Ø)
Dp. 0.980m

EX. F2
CL164.100
IL162.620 (150Ø)
Dp. 1.480m

EX. F4
CL165.040
IL162.040 (150Ø)
Dp. 3.000m

EX. F3
CL165.830
IL162.350 (150Ø)
Dp. 3.480m

RG
DRG
WEIGH BRIDGE