



NOTE

DRAINAGE DESIGNED IN ACCORDANCE WITH THE FOLLOWING THIRD PARTY INFORMATION:

TOPOGRAPHICAL SURVEY 5762_014 FROM 30.06.16

LANDSCAPE ARCHITECT LAYOUT
254173-LPP-90-SW-L00-DPL-L-0002- REV c03 FROM 04.07.19

FOUNDATIONS
254173-CTN-10-03X-L00-DPL-S-0102 C07 ISSUED 05.07.19
254173-CTN-10-04X-L00-DPL-S-0102 C07 ISSUED 05.07.19

M&E POP UP LAYOUT
254173-WAA-20-03X-L00-DPL-A-3010-C7
254173-WAA-20-04X-L00-DPL-A-4010-C6
SETTING OUT DRAWING SENT 03.07

AS BUILT INFORMATION PROVIDED BY PPOC

*SHOULD ANY OF THE ABOVE CHANGE THE DRAINAGE IS TO BE UPDATED ACCORDINGLY.

FOUL WATER POP UPS INVERT LEVEL 26.05 OR LOWER (IF NOT SPECIFIED ON DRAWING)
FOUL WATER SLOPE BETWEEN POPUP AND MANHOLE MAX 1:10

GULLIES AND RWPS MINIMUM INVERT LEVEL 26.225

DRAINAGE AND PLAN BASED ON LOCAL COORDINATES

CONSTRUCTION NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- DESIGN BASED ON TOPOGRAPHICAL SURVEY AND CCTV SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
- ALL DRAINAGE WORKS TO BE IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (CESWI) AS INCLUDED IN SEWERS FOR ADOPTION 7th EDITION, THE REQUIREMENTS OF APPROVED DOCUMENT H (2002 EDITION) AND BUILDING REGULATIONS 2000.
- ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORNANCE DATUM UNLESS OTHERWISE NOTED.
- IT IS ADVISED THAT THE CONTRACTOR SURVEY RETAINED EXISTING DRAINAGE PRIOR TO COMMENCEMENT TO CONFIRM LOCATION AND CONDITION. POTENTIAL PRE-CLEANINGS TO BE UNDERTAKEN IN ORDER TO FACILITATE SURVEY IF REQUIRED.
- EXISTING SEWER LOCATIONS WHERE THE PROPOSED DRAINAGE IS TO CONNECT ARE TO BE SURVEYED AND EXACT LEVELS CONFIRMED AND PROVIDED TO ENGINEER PRIOR TO COMMENCEMENT OF WORKS.
- ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
- ALL EXISTING DRAINS TO BE ABANDONED SHALL BE EITHER REMOVED OR GROUTED UP IF NOT POSSIBLE. GROUTING TO BE PERFORMED BY CAPPING ALL ENDS / CONNECTIONS AND FILLING THE RETAINING VOID WITH GROUT. IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION (CESWI) 7TH EDITION.
- ALL SOFT SPOTS TO BE REMOVED FROM BOTTOM OF EXCAVATIONS AND TO BE REFILLED TO FORMATION LEVEL IN ACCORDANCE WITH GROUNDWORKS SPECIFICATIONS.
- RAISED GROUND MUST BE FILLED IN ACCORDANCE WITH GROUNDWORKS SPECIFICATIONS AND CONSOLIDATED BEFORE ANY SEWER WORKS ARE CARRIED OUT.
- ALL ADAPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH SEWERS FOR ADOPTION 7th EDITION AND CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION AND CONSTRUCTED TO THE RELEVANT STATUTORY UNDERTAKERS DETAILS.
- ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION BS EN 752 208 DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS AND THE BUILDING REGULATIONS APPROVED DOCUMENT H.
- ALL SEWERS, UNLESS AGREED OTHERWISE STATED, SHALL BE:
 - 150mm to 300mm DIA TO BE VITRIFIED CLAY
 - 375mm DIA AND GREATER TO BE CLASS 125 CONCRETE PIPES
- ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS.
- PIPE MATERIALS IN ACCORDANCE WITH THE FOLLOWING:
 - ALL VITRIFIED CLAY PIPES TO BS EN 252-1
 - ALL CONCRETE PIPES TO BE TO BS EN 1916
 - ALL CONCRETE MANHOLES TO BE TO BS EN 1917
- AS AN ALTERNATIVE THE CONTRACTOR MAY USE AN APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU) WITH APPROVAL FROM THE ENGINEER.
- ALL ADAPTABLE DRAINAGE PIPES WILL REQUIRE A MINIMUM OF 1200mm COVER, IN ACCORDANCE WITH SEWERAGE UNDERTAKERS REQUIREMENTS.
- ALL PRIVATE DRAINAGE PIPES WITH A COVER OF LESS THAN 600mm IN NON-TRAFFICKED AREAS AND LESS THAN 900mm IN TRAFFICKED AREAS TO BE BEDDED AND SURROUNDED IN CONCRETE (CLASS 2). COMPRESSIBLE MATERIAL SHALL BE PROVIDED AT EVERY PIPE JOINT. WHERE COVER EXCEEDS THIS DEPTH PIPES ARE TYPICALLY BEDDED AND SURROUNDED IN CLASS 5. REFER TO PIPE EMBEDMENT DETAILS DRAWING FOR SPECIFIC TYPES.
- BACKFILL TO DRAINAGE TRENCHES UNDER HANDSTANDING AREAS TO BE TYPE 1 SUB BASE MATERIAL. ELSEWHERE BACKFILL TO BE FREE DRAINING READILY COMPATIBLE MATERIAL FREE FROM DETRIMENTAL ORGANIC MATTER, FROZEN SOIL, CLAY LUMPS AND LARGE STONES. TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK.
- BEDDING AND BACKFILL MATERIALS TO CONFORM TO THE REQUIREMENTS OF WS 4-08-02 (TABLE A2).
- WHERE FOUL SEWERS RUN ABOVE SURFACE SEWERS, CONCRETE PROTECTION MAY BE REQUIRED AT CROSSOVERS TO PREVENT ANY POTENTIAL CONTAMINATION.
- THE FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE TO THE OUTSIDE FACE OF THE CONCRETE SURROUND AND CONNECTED TO A LENGTH OF RODDER PIPE.
- ALL CONNECTIONS PASSING THROUGH BASES OR EDGE BEAMS TO BE IN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150mm FROM FACE OF CONCRETE.
- WHERE DRAINAGE PIPES ARE LESS THAN 300mm BELOW THE UNDERSIDE OF THE GROUND FLOOR SLAB, CONCRETE ENCASEMENT IS REQUIRED (CLASS 2). COMPRESSIBLE JOINTS ARE TO BE PROVIDED AT EVERY PIPE JOINT WITHIN THE CONCRETE.
- WHERE PIPES ARE MORE THAN 300mm BELOW THE UNDERSIDE OF THE SLAB, CLASS 5 BEDDING IS ACCEPTABLE.

GENERAL NOTES

- ALL DRAINAGE WORKS TO BE IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (CESWI) AS INCLUDED IN SEWERS FOR ADOPTION 7th EDITION, THE REQUIREMENTS OF APPROVED DOCUMENT H (2002 EDITION), BUILDING REGULATIONS 2000 AND THE DETAILS PROVIDED ON THE CONTRACT DRAWINGS.
- LINE AND LEVEL OF ALL EXISTING DRAINAGE TO BE CONFIRMED BY SITE INSPECTION BEFORE WORKS TAKE PLACE AND REPORTED BACK TO ENGINEER. ANY REDUNDANT MANHOLES TO BE BROKEN OUT AND BACKFILLED WITH GRANULAR MATERIAL. ANY REDUNDANT PIPES TO BE FILLED WITH 1:1 FILLMENT MIX OR BROKEN OUT.
- ALL FOUL AND SURFACE WATER DRAINS UP TO AND INCLUDING 225mm DIAMETER TO BE CLAYWARE AS REPIVORTH SUPERSLEEVEHERPELEVE PLUS OR SIMILAR APPROVED. ALL PIPES 300mm DIAMETER AND ABOVE TO BE CONCRETE CLASS M.
- AS AN ALTERNATIVE THE CONTRACTOR MAY USE APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU).
- ALL PIPES ARE TO BE LAID IN A CLASS 5 BEDDING, PIPES LAID UNDER ROAD AND CAR PARKING PAVEMENTS WITH LESS THAN 1200mm OF COVER SHALL BE LAID IN A CLASS 2 BEDDING WITH FLEXIBLE JOINTS.
- ALL DRAINAGE PIPELINES SHALL BE PROTECTED DURING CONSTRUCTION WHERE INTERMEDIATE COVER IS LESS THAN 900mm.
- SEWER TRENCH BACKFILL UNDER ROADS AND PARKING PAVEMENTS TO BE TYPE 1 GRANULAR MATERIAL.
- ALL COVER LEVELS ARE APPROXIMATE. ALL COVERS TO BE SET AT FINISHED PAVEMENT LEVEL. REFER TO APPROPRIATE ARCHITECTS DRAWING.
- FOR MANHOLE, PIPE BEDDING AND OTHER DETAILS REFER TO THE TYPICAL DRAINAGE DETAILS DRAWING.
- ALL STACKS AND RWPS TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT TO BE ABOVE ANY GROUND FLOOR CONNECTED APPLIANCE SPILL LEVEL. LARGE ACCESS FITTING REQUIRED ABOVE GROUND WHERE GREATER THAN 12m UP TO 22m TO JUNCTION. SMALL ACCESS FITTING REQUIRED UP TO 12m TO JUNCTION.
- ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND RODDABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.
- ALL BRANCH CONNECTIONS TO BE MADE WITH SWEEP BENDS IN THE DIRECTION OF FLOW IN THE MAIN SEWER.
- WHERE NO WCS ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 145 MIN AFTER THE CONNECTION OF AT LEAST TWO WC, A MIN. FALL OF 1:80 APPLIES.
- ALL INTERNAL COVERS TO HAVE MECHANICALLY JOINTED CORNERS AND DOUBLE SEALED WITH RECESSED TRAY TO ALLOW FOR FINISHES.
- ALL MANHOLE COVERS IN BLOCKSLAB AND EXTERNAL PAVING AREAS TO HAVE RECESSED COVERS OF THE APPROPRIATE GRATE TO ACCEPT ARCHITECTS PAVING PROPOSAL.
- UNLESS NOTED OTHERWISE IN THE MANHOLE SCHEDULE, ALL MANHOLE, GULLY AND CHANNEL COVERS (IRONWORK) SHOULD BE THE FOLLOWING SPECIFICATION:
 - B125 LOAD CLASS IN PEDESTRIAN AREAS
 - D400 LOAD CLASS IN VEHICULAR AREAS
- COVER LEVELS, GULLY POSITIONS, AND BUILDING LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.
- OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING:
 - (I) ALL OPERATIONS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE GENERAL HEALTH AND SAFETY POLICY OF THE DEVELOPER AS REQUIRED BY SECTIONS 2 OF THE HEALTH AND SAFETY AT WORK ACT 1974 AND IN PARTICULAR THE CONSTRUCTION (GENERAL PROVISIONS) REGULATIONS.
 - (II) THE LOCAL AUTHORITY AND UTILITIES COMPANIES ARE TO BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK ON SITE.
 - (III) PRIOR TO CONSTRUCTION THE ACTUAL POSITIONS AND DEPTHS OF SERVICES LIKELY TO BE AFFECTED BY THE WORKS SHOULD BE ESTABLISHED BY MEANS OF HAND IN CLOSE LIAISON WITH THE UTILITY COMPANIES. THE CONTRACTOR SHALL IMMEDIATELY ADVISE THE ENGINEER OF ANY SERVICES EXPOSED WHICH MAY AFFECT THE DESIGN.
 - (IV) ALL OPERATIVES WORKING ON THE HIGHWAY WORKS MUST HAVE STREET WORKS ACCREDITATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT PIPES ARE ADEQUATELY PROTECTED FROM CONCENTRATED LOADING BY CONSTRUCTION TRAFFIC DURING THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES.
- THE CONTRACTOR SHALL ALLOW FOR KEEPING TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SLUMPS AND DE-WATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY ALFA AND ENVIRONMENT AGENCY.
- IF IT IS ADVISED THAT DRAINAGE WORKS ARE TO BE CONSTRUCTED FROM THE OUTFALL TOWARDS THE HEAD OF RUN TO ENSURE THE OUTFALL CAN BE ACHIEVED.
- ALL DRAINS TO BE CCTV SURVEYED ON COMPLETION OF THE WORKS.
- GREASE TRAPS SHOULD BE PROVIDED ABOVE GROUND WITHIN AN ENZYME TREATMENT SYSTEM, BY APPROPRIATE SPECIALIST DESIGNER.
- DESIGN ASSUMES DILUTION TRAPS TO BE PROVIDED WITHIN ABOVE GROUND DESIGNS FOR ALL CLASSROOM SINKS.

FOR NETWORK DETAILS REFER TO MANHOLE SCHEDULE DRAWING NUMBER: 254173-CTN-51-XX-L00-SSC-C-021

FOR EXTERNAL SURFACES REFER TO DRAWING NUMBER: 254173-CTN-51-XXX-L00-DPL-C-040-C01

PROPOSED DRAINAGE CHANNEL POSITIONS ARE INDICATIVE ONLY AND SUBJECT TO FINAL CO-ORDINATION WITH DETAILED LEVELS BY LANDSCAPE ARCHITECT.

ATTENUATION TANK LOCATION SHOWN BASED ON INDICATIVE EXTERNAL LEVELS AND HYDROBRAKE DISCHARGE OF 135 L/S AS SUBMITTED TO DISCHARGE PLANNING CONDITIONS.

BELOW GROUND CONNECTION FROM POPUP SHOULD BE THE SAME SIZE AS POPUP ON GROUND FLOOR LEVEL SPECIFIED BY M&E

KEY

- PROPOSED FOUL DRAINAGE
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED MAURATON LINEAR DRAINAGE CHANNEL. UNIT SIZES AS NOTED
- PROPOSED GATIC ACCESS BOX
- PROPOSED GATIC SILT BOX
- PROPOSED HYDROBRAKE MANHOLE
- PROPOSED PETROL INTERCEPTOR
- PROPOSED ATTENUATION STORAGE
- FOUNDATION
- PROPOSED FIN DRAIN
- PROPOSED RISING MAIN FROM PUMP STATION
- THRESHOLD DRAIN WITH SUMP UNIT

OUTLET BOX FOR FIN DRAINS

INSET

C12	PEEL DRAINAGE WORKS ADDED, WITHOUT GULLIES ADDED	20.08.21	ATL	ATL
C11	VENT PIPE NOTE ADDED	18.07.21	MW	MW
C10	MANHOLE S2 RENUMBERED TO S1	04.03.21	ATL	MW
C09	RWPS RELOCATED, REQUIRE TO BE REBUILT	19.10.20	MW	MW
C08	THRESHOLD DRAINS ADDED	16.10.19	OUT	MW
C07	NOTE ADDED	24.09.19	MW	MW
C06	SURFACE WATER DRAINAGE REDESIGNED	20.08.19	MW	MW
C05	CHANNELS, CRANE POSITION UPDATED	09.08.19	MW	MW
C04	DOWNPIPES POSITION UPDATED	26.06.19	MW	MW
C03	FIN DRAIN MOVED, COMMENTS ADDED (SEE CLOUD)	17.05.19	MW	CD
C02	ISSUED FOR CONSTRUCTION-BUILDING MOVED	10.05.19	MW	CD
C01	ISSUED FOR CONSTRUCTION	20.04.18	ZG	CD
Rev	Description	Date	By	Chk'd

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Status: **AS BUILT**

Project: **POTATO WHARF 3 & 4**

Dwg Title: **DRAINAGE LAYOUT**

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