



Historic Existing 300mm Sewer Shown from Sewer Records. Sewer could not be located via drainage survey. Further investigation required to be carried to determine extents of this existing sewer. Discussion with UU for potential abandonment under S116

Existing 375mm dia. United Utilities Surface Water Sewer. UU STORM SEWER TO BE RETRACTED. ACCURATE INVERT LEVEL TO BE CONFIRMED

Existing 300mm United Utilities Combined Sewer to be abandoned under section 116. May need to be diverted subject to further discussion with UU. Diversion route can be accommodated if required.

DRAINAGE

- ALL DRAINAGE WORKS TO BE CONSTRUCTED FROM THE OUTFALL TOWARDS THE HEAD OF RUN TO ENSURE THE OUTFALL CAN BE ACHIEVED.
- ALL EXISTING DRAINS & SERVICES (LINE & LEVELS) TO BE CHECKED & CONFIRMED BY THE CONTRACTOR PRIOR COMMENCEMENT OF ANY ON SITE DRAINAGE WORKS. ANY DISCREPANCY IN LEVELS IS TO BE REPORTED IMMEDIATELY TO APP.
- ALL DRAINAGE WORK TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS, BS EN 752 & TO THE SATISFACTION OF THE BUILDING INSPECTOR.
- ALL PROPRIETARY ITEMS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S DETAILS, INSTRUCTIONS & SPECIFICATIONS.
- ALL COVER LEVELS ARE APPROXIMATE. EXACT LEVELS TO BE DETERMINED FROM THE EXTERNAL WORKS LAYOUT.
- INVERT LEVELS QUOTED AT MANHOLES & INSPECTION CHAMBERS ARE THOSE OF THE LARGEST CONNECTED PIPE DIAMETER. PIPES AT CHAMBERS TO BE LAID WITH SOFFITS LEVEL UNLESS NOTED OTHERWISE.
- PIPE GRADIENTS WHERE STATED ARE APPROXIMATE - LEVELS AT THE CHAMBERS TAKE PRECEDENT.
- REFER TO ARCHITECT'S DRAWINGS FOR PRECISE LOCATION OF ALL RAINWATER PIPES, INTERNAL CONNECTIONS ETC.
- ALL INTERNAL CONNECTIONS TO HAVE AN ABOVE-FLOOR ACCESS POINT TO ENABLE FUTURE ACCESS FOR MAINTENANCE.
- PIPES & FITTINGS TO BE:
 - CONCRETE PIPES & ANCILLARY PRODUCTS TO BS 5911:2022 & BS EN 1916:2002.
 - VITRIFIED CLAY PIPES & FITTINGS TO BS EN 295:2013
 - DUCTILE IRON TO BS EN 598:2007 & BS ISO 4179:2005.
 - PERFORATED VITRIFIED CLAY PIPES FOR LAND DRAINAGE TO BS 1196.
 - PLASTIC PIPES FOR LAND DRAINAGE TO BS 4962:1982.
 - PLASTIC PIPING SYSTEMS FOR NON-PRESSURE UNDERGROUND DRAINAGE & SEWAGE TO BS EN 1401 & BS 4680 - SOLID WALL, STRUCTURED WALL PIPES TO BS EN 13476.
 - PRECAST CONCRETE MANHOLE UNITS TO BS EN 1917:2002.
 - PLASTIC INSPECTION CHAMBERS FOR DRAINS & SEWERS TO BS EN 13598-1:2010.
 - GULLY & MANHOLE TOPS FOR VEHICULAR & PEDESTRIAN AREAS TO BS EN 124:1994.
 - DRAINAGE CHANNELS FOR VEHICULAR & PEDESTRIAN AREAS TO BS EN 1433:2002.
- ALL MANHOLE COVERS, ROAD GULLY COVERS & FRAMES TO COMPLY WITH BS EN124 NON ROCKING TYPE. UNLESS NOTED OTHERWISE USE CLASS:
 - A15 FOR USE IN PEDESTRIAN AREAS WHERE VEHICLES HAVE NO ACCESS.
 - B125 FOR USE IN CAR PARKS & PEDESTRIAN AREAS WHERE INFREQUENT LIGHT VEHICLE ACCESS IS LIKELY (INCLUDING DRIVEWAYS).
 - C250 FOR ACCESS COVERS & GULLY GRATINGS IN AREAS OF SLOW MOVING, HEAVY TRAFFIC; ALSO FOR GULLY GRATINGS IN CARRIAGEWAY WITHIN 500mm OF KERB & UP TO 200mm INTO THE FOOTWAY.
 - D400 FOR USE IN CARRIAGEWAYS OF ROADS & PARKING AREAS ACCESSED BY ALL TYPES OF VEHICLES.
 - E600 FOR USE IN AREAS WHERE HIGH WHEEL LOADS ARE PRESENT.
 - F900 FOR USE IN AREAS WHERE EXTREMELY HIGH WHEEL LOADS ARE PRESENT SUCH AS AIRCRAFT PAVEMENTS, DOCKS, HEAVY INDUSTRIAL SITES.
- MANHOLES IN INTERNAL AREAS REQUIRE DOUBLE SEALED COVERS WITH LOCKING SCREWS. RECESSED WHERE REQUIRED TO ACCOMMODATE FLOOR FINISHES TO ARCHITECT'S SPECIFICATION.
- PIPE BEDDING
 - USE CLASS 3 BEDDING UNLESS NOTED OTHERWISE. NB PROTECT AGAINST CONSTRUCTION TRAFFIC AS NECESSARY
 - USE CLASS 2 CONCRETE BED & SURROUND OR CONCRETE SLAB PROTECTION AS FOLLOWS:
 - CLASS 120 CLAYWARE OR CLASS M CONCRETE (100 - 6000 PIPES)
 - LANDSCAPING - LESS THAN 600mm COVER TO CROWN. HARDSTANDING - LESS THAN 1200mm COVER TO CROWN
 - PLASTIC (100 - 3000 PIPES)
 - LANDSCAPING - LESS THAN 600mm COVER TO CROWN. HARDSTANDING - LESS THAN 900mm COVER TO CROWN
- PIPES BELOW CONCRETE GROUND FLOOR SLABS:
 - WHERE THE CROWN OF THE PIPE IS WITHIN 300mm OF THE UNDERSIDE OF SLAB, SPECIAL PROTECTION TO BE PROVIDED IN ACCORDANCE WITH BUILDING REGULATIONS H1 2.44 OR 150mm GEND CONCRETE BED & SURROUND CAST INTEGRALLY WITH SLAB.
 - OTHERWISE USE CLASS 3 BEDDING.
- MAIN BACKFILL TO BE WELL COMPACTED IN 150mm LAYERS OF:
 - SELECTED BACKFILL MATERIAL IN ALL SOFT LANDSCAPED AREAS
 - TYPE 1 GRANULAR MATERIAL IN ALL HARDSTANDING AREAS & PUBLIC HIGHWAYS
- BACKFILL TO DRAINS NEAR FOUNDATIONS TO BE IN ACCORDANCE WITH BUILDING REGULATIONS H1 DIAGRAMS 8 & 12.
- CCTV TO BE CARRIED OUT TO VERIFY CONDITION OF ANY DRAINAGE TO BE RE-USED.

DRAINAGE KEY:

- PROPOSED FOUL DRAINAGE PIPE
- PROPOSED FOUL WATER PVC INSPECTION CHAMBER (SIZE VARIES)
- PROPOSED STORM DRAINAGE PIPE
- PROPOSED STORM INSPECTION CHAMBER (SIZE VARIES)
- PROPOSED DIVERTED DRAINAGE PIPE
- PROPOSED DIVERTED WATER INSPECTION CHAMBER (SIZE VARIES)
- PROPOSED ATTENUATION TANK
- PROPOSED PERMEABLE PAVING (LINED)
- PROPOSED ACCO CHANNEL
- EXISTING UNITED UTILITIES COMBINED WATER SEWER
- ABANDONED EXISTING UNITED UTILITIES COMBINED WATER SEWER
- EXISTING UNITED UTILITIES STORM WATER SEWER
- SEWER EASEMENT
- FLOW EXCEEDANCE ROUTE
- INDICATIVE FFL

Notes

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GENERAL NOTES

- THE STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT CLIENT, ARCHITECT, SERVICES ENGINEER, AND SPECIALIST CONTRACTOR DRAWINGS, REPORTS AND SPECIFICATIONS.
- FOR SETTING OUT AND LEVELS REFER TO ARCHITECTS DRAWINGS.
- FOR THE PURPOSE OF CONSTRUCTION ALL DRAWINGS MUST NOT BE SCALED AND ONLY WRITTEN OR CALCULATED DIMENSIONS USED. LEVEL DATUMS TO BE CONFIRMED BY THE ARCHITECT.
- ANY REVISIONS TO THE LAYOUT DETAILS REQUIRED BY THE CONTRACTOR TO BE AGREED AND APPROVED BY THE ALIGN PROPERTY PARTNERS ENGINEER.
- FINISHED FLOOR LEVELS TO BE DETERMINED.
- ALL PROPRIETARY PRODUCTS ARE TO BE USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S DETAILS AND REQUIREMENTS.
- GENERALLY, ONLY KNOWN PENETRATIONS, HOLES, POCKETS AND RECESSES ETC. WITH ANY DIMENSIONS GREATER THAN 150 ARE SHOWN ON THE DRAWINGS. FOR CONFIRMATION OF THESE AND FOR DETAILS OF SMALLER HOLES PLUS INSERTS, FIXINGS ETC. REFERENCE SHALL BE MADE TO THE ARCHITECT'S SERVICES ENGINEERS OR THE RELEVANT SUBCONTRACTOR'S BUILDERS WORK DRAWINGS.
- THE CONTRACTOR SHALL ENSURE THAT TEMPORARY LOADS ONTO THE NEW STRUCTURES/DRAINAGE SHALL BE LESS THAN THOSE FOR WHICH IT HAS BEEN DESIGNED.
- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND CHECKING THE SETTING OUT OF GRIDLINES, LEVELS AND DATUMS.
- ANY DISCREPANCIES BETWEEN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS SHOULD IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACT ADMINISTRATOR.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT NOISE, VIBRATION AND DUST RESULTING FROM THE WORKS ARE KEPT WITHIN REASONABLE LIMITS.
- THE CONTRACTOR IS TO ALLOW A MINIMUM OF 10 WORKING DAYS IN THEIR PROGRAMME FOR THE REVIEW OF ANY CONTRACTOR'S DESIGN PORTIONS OF WORK FOR REVIEW BY THE ALIGN PROPERTY PARTNERS ENGINEER.
- IRRESPECTIVE OF ANY NAMED MANUFACTURERS OF ANY PRODUCT/MATERIAL NOTED ON DRAWINGS, THE CONTRACTOR IS FREE TO PROPOSE AN EQUAL OR APPROVED PRODUCT/MATERIAL PROVIDED THAT ANY SUCH CHANGE TO THE SPECIFICATION MEETS A SIMILAR LEVEL OF PERFORMANCE AND IS NOTED ON ALL M TENDER RETURNS AND DOCUMENTATION FOR ALIGN PROPERTY PARTNERS.

IMPORTANT:

DRAWING PROVIDED FOR INFORMATION ONLY AND IS SUBJECT TO THE FOLLOWING STATUTORY APPROVALS:

- UNITED UTILITIES APPROVAL
- PLANNING APPROVAL
- BUILDING CONTROL

ALL CONSTRUCTION WORKS PRIOR TO APPROVALS ABOVE WILL BE UNDERTAKEN AT CLIENTS/CONTRACTORS RISK



P02	Amendments following LLFA discussion. Attenuation tank width reduced and chamber numbering.	MD 12/12/23	JF 14/12/23	BD 01/10/24
P01	Initial Issue.	ZS 29/06/23	BD 29/06/23	BD 29/06/23
Rev	Details	Author & Date	Checked & Date	Approved & Date



Client Westmorland & Furness Office, Riverside Business Park, Natland Road, Kendal LA9 7SX

Project Name Mosscaire St Vincents

Princesdom Street, Manchester

Drawing Title

Drainage Strategy

Purpose

Planning

Scale	Drawn	Checked	Approved
1:250	ZS	BD	BD
Original Size	Date	Date	Date
A1	29/06/23	29/06/23	29/06/23
Drawing Number	Rev.		
PV2309-APP-92-XX-DR-C-2001	P02		