

RWPS, GULLIES, CHANNEL DRAIN AND FOUL WATER SOURCES ARE INDICATIVE AND SUBJECT TO DETAILED DESIGN, SETTING OUT, LEVELS, FOUNDATIONS AND EXTERNAL WORKS.

CHANNEL DRAINAGE SIZES TO BE SUITABLY SIZED TO SUIT DRAINED AREAS. ALL CHANNEL DRAINS TO HAVE SUMP UNIT/SILT BUCKET ON ALL OUTLETS

RWP AND FOUL POP UPS ARE INDICATIVE ONLY AWAITING CONFIRMATION FROM THE ARCHITECT

EXISTING DRAINAGE INFORMATION FROM ALTERNATIVE DRAINAGE DATED NOVEMBER 2021.

SITE LAYOUT BASED ON PARK DESIGN ARCHITECTS DRAWING 21.33_003C DATED SEPTEMBER 2021

EXISTING LEVELS ARE BASED ON TOPOGRAPHICAL SURVEY BY SURVEY OPERATIONS DATED NOVEMBER 2020

YORKSHIRE WATER APPARATUS BASED ON RECORDS RECEIVED NOVEMBER 2021. POSITIONS ARE INDICATIVE ONLY AND SHOULD BE CONFIRMED ONSITE PRIOR TO CONSTRUCTION

MANHOLES AT SIPHONIC DRAINAGE OUTLET(S) TO HAVE SUITABLE VENTS TO BREAK THE SIPHON - VENT SIZE SUBJECT TO CONFIRMATION OF SIPHONIC DRAINAGE. DESIGN BY OTHERS

INVERT LEVELS OF YORKSHIRE WATER DRAINAGE IS UNKNOWN AT PROPOSED OUTFALL LOCATIONS. POSITIONS AND LEVELS TO BE CONFIRMED ONSITE PRIOR TO ANY ON SITE WORKS. DESIGN SURFACE WATER ARE ASSUMED TO ALLOW FOR GRAVITY CONNECTION/OUTFALL. SHOULD EXISTING LEVELS NOT ALLOW FOR THE PROPOSED, A PUMPED OUTFALL WILL HAVE TO BE CONSIDERED.

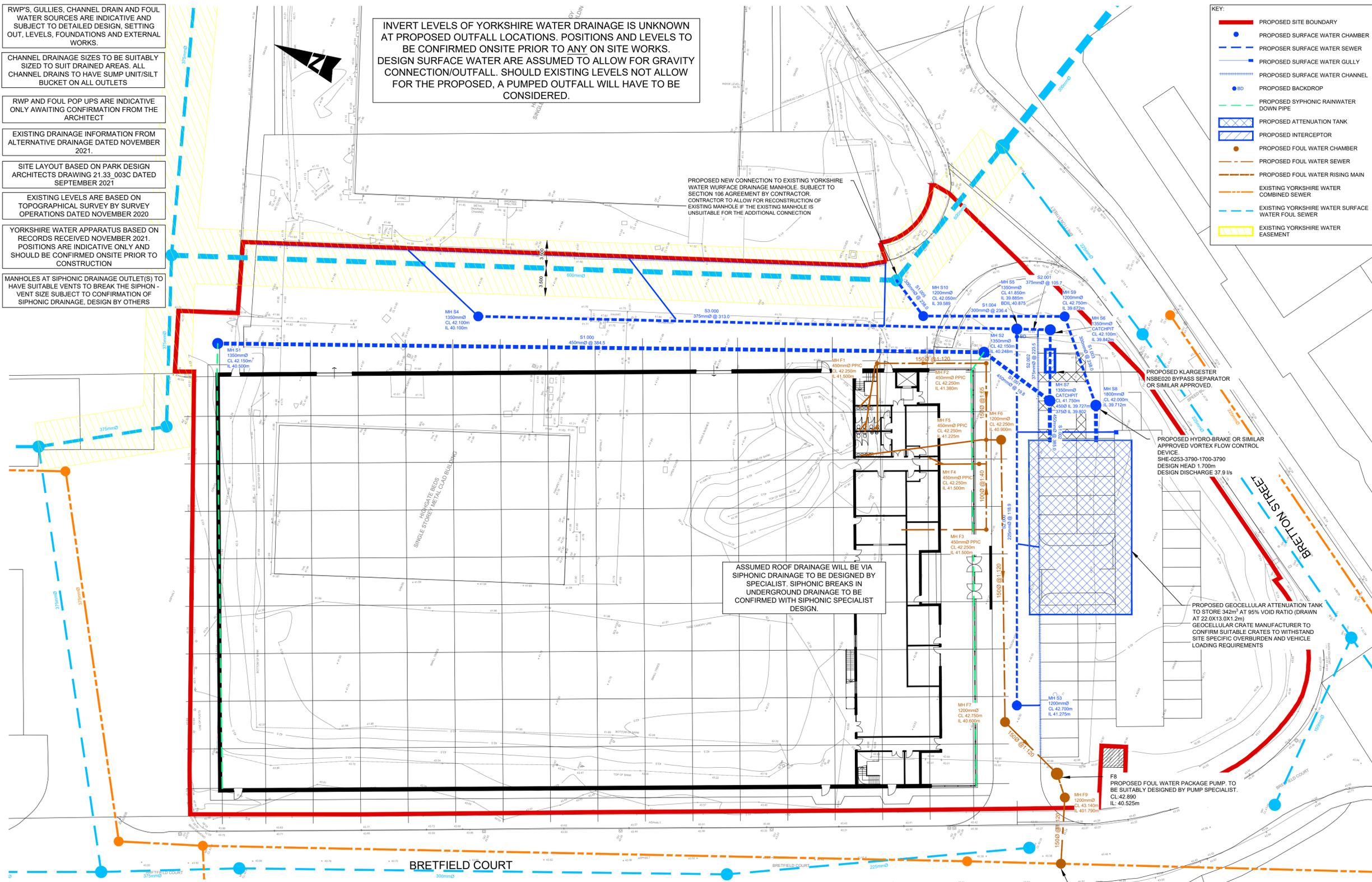
PROPOSED NEW CONNECTION TO EXISTING YORKSHIRE WATER WURFACE DRAINAGE MANHOLE. SUBJECT TO SECTION 106 AGREEMENT BY CONTRACTOR. CONTRACTOR TO ALLOW FOR RECONSTRUCTION OF EXISTING MANHOLE IF THE EXISTING MANHOLE IS UNSUITABLE FOR THE ADDITIONAL CONNECTION

ASSUMED ROOF DRAINAGE WILL BE VIA SIPHONIC DRAINAGE TO BE DESIGNED BY SPECIALIST. SIPHONIC BREAKS IN UNDERGROUND DRAINAGE TO BE CONFIRMED WITH SIPHONIC SPECIALIST DESIGN.

- KEY:
- PROPOSED SITE BOUNDARY
 - PROPOSED SURFACE WATER CHAMBER
 - PROPOSED SURFACE WATER SEWER
 - PROPOSED SURFACE WATER GULLY
 - PROPOSED SURFACE WATER CHANNEL
 - PROPOSED BACKDROP
 - PROPOSED SIPHONIC RAINWATER DOWN PIPE
 - ▨ PROPOSED ATTENUATION TANK
 - ▨ PROPOSED INTERCEPTOR
 - PROPOSED FOUL WATER CHAMBER
 - PROPOSED FOUL WATER SEWER
 - PROPOSED FOUL WATER RISING MAIN
 - EXISTING YORKSHIRE WATER COMBINED SEWER
 - EXISTING YORKSHIRE WATER SURFACE WATER FOUL SEWER
 - ▨ EXISTING YORKSHIRE WATER EASEMENT

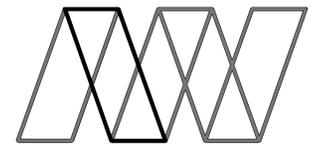
- NOTES:
- THESE NOTES ARE INTENDED TO AUGMENT DRAWINGS AND SPECIFICATIONS. WHERE CONFLICT OF REQUIREMENTS EXIST THE ORDER OF PRECEDENCE SHALL BE AS SHOWN IN THE SPECIFICATION. OTHERWISE THE STRICTEST PROVISION SHALL GOVERN.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS.
 - DRAWINGS NOT TO BE SCALED. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER AND FURTHER INSTRUCTIONS OBTAINED BEFORE WORK IS COMMENCED.
 - THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE AND ENSURE THAT THE BUILDING AND ITS COMPONENTS ARE SAFE DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS WHICH MAY BE NECESSARY. SUCH MATERIAL REMAINING THE PROPERTY OF THE CONTRACTOR ON COMPLETION, AND FOR ENSURING THAT THE WORKS AND ANY ADJACENT PROPERTIES
 - ARE SAFE IN THE TEMPORARY CONDITION. THE DRAINAGE STRATEGY IS DESIGNED TO CATER FOR THE 100 YEAR STORM + 30% CLIMATE CHANGE. NO FLOODING DURING THE PEAK 30 YEAR STORM. MINIMAL CONTROLLED FLOODING WITHIN THE EXTERNAL YARD DURING THE 100 YEAR STORM + 30% CC.
 - SURFACE WATER PACKAGE PUMP MAY BE REQUIRED IF THE EXISTING DRAINAGE AT THE POINT OF THE CONNECTION IS HIGHER THAN THE INVERT LEVEL SHOWN AND/OR THE PIPE CONDITION IS NOT SATISFACTORY.
 - LINE LEVEL AND LOCATION OF EXISTING DRAINAGE IS TO BE VERIFIED PRIOR TO DETAILED DESIGN.
 - ALL PRIVATE DRAINAGE WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS PART H, BS EN 752, THE CIVIL ENGINEERS SPECIFICATION FOR THE WATER INDUSTRY.
 - ABOVE GROUND DRAINAGE DETAILS TO BE DESIGNED/CONFIRMED BY THE ARCHITECT/M&E CONTRACTOR
 - ALL SPECIALIST/PROPRIETARY PRODUCTS SUCH AS SEPARATORS, ATTENUATION TANKS, CHANNEL DRAINS, SOAKAWAYS, PACKAGE PUMPING STATION AND WATER TREATMENT UNITS TO BE INSTALLED AS PER THE MANUFACTURERS INSTALLATION DETAILS AND SPECIFICATIONS.

- INTERCEPTOR NOTES:
- INTERCEPTORS TO BE BYPASS SEPARATOR TYPE.
 - INTERCEPTORS TO BE COMPLIANT WITH THE CURRENT BUILDING REGULATIONS, ENVIRONMENT AGENCY REQUIREMENTS AND WITH BS EN 858-2002 A1 2004 AND BS EN 858-2-2003.
 - INTERCEPTORS TO RESIST GROUNDWATER AND STRUCTURALLY APPROPRIATE FOR ITS LOCATION RELATIVE TO TRAFFIC LOADING (TEMPORARY AND PERMANENT STATES).
 - INTERCEPTORS TO BE VENTED TO NEAREST LANDSCAPED AREA.
 - INTERCEPTORS TO BE PROVIDED WITH ALARM, POWER AND TELEMETRY LINKED TO A LOCATION TO BE AGREED.



- PRIVATE DRAINAGE NOTES:
- DRAINAGE SYSTEMS TO COMPLY WITH THE FOLLOWING STANDARDS: BS EN 752-2008, BUILDING REGULATIONS APPROVED DOCUMENT PART H, 2015 EDITION
 - ALL COMPONENTS USED IN DRAINAGE SYSTEMS TO COMPLY WITH THE FOLLOWING: BS EN 476-2011
 - ALL DRAINAGE SYSTEMS AND COMPONENTS TO BE CONSTRUCTED AND TESTED TO THE FULL SATISFACTION OF THE BUILDING REGULATIONS INSPECTOR
 - ALL DRAINAGE TO BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH BS EN 1610-2015.
 - EXACT POSITIONS OF SVP'S, STUB-STACKS, W.C. OUTLETS ETC. AND RAINWATER DOWNPIPES ARE TO BE ACCURATELY LOCATED FROM THE ARCHITECT'S DESIGN DRAWINGS
 - PIPES UP TO 2250 TO BE VITRIFIED CLAY, VITRIFIED CLAY PIPES AND FITTINGS TO COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 205-1:2013, 2:2013, 3:2012 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN 205 PIPE CRUSHING STRENGTH.
 - PIPES > 2250 TO BE CONCRETE. CONCRETE PIPES TO BE CLASS 120 TO BS EN 1916:2002 & BS 5911-1:2002.
 - PRECAST CONCRETE MANHOLES TO BE IN ACCORDANCE WITH BS EN 1917:2002 AND BS 5911-3:2010, 4:2002 AND TO BE KITEMARKED. PRECAST CONCRETE RINGS AND COVER SLABS TO CONCRETE PIPES TO BE JOINED WITH CEMENT MORTAR UNLESS NOTED OTHERWISE.
 - INSITU AND PRECAST CONCRETE UNITS SHALL HAVE SULPHATE RESISTING PORTLAND CEMENT TO BS EN 197-1:2011.
 - POLYPROPYLENE INSPECTION CHAMBERS TO COMPLY WITH BS EN 13598-1:2010, 2:2016 AND BS 7158-2001 AND TO BE KITEMARKED.
 - MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015. MANHOLE COVERS AND FRAMES TO BE OF A NON-ROCKING DESIGN WITH CUSHION INSERTS AND KITEMARKED. LOAD CLASS D400 COVERS TO BE USED IN ALL LOCATIONS. ALL COVERS TO BE BADGED 'FW' OR 'SW' AS APPROPRIATE. MANHOLE COVER SLABS AND ACCESS TO BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION TECHNICAL BULLETIN ISSUED SEPTEMBER 2001.
 - POLYPROPYLENE INSPECTION CHAMBER COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015. COVERS AND FRAMES TO BE OF A NON-ROCKING DESIGN WITH CUSHION INSERTS AND KITEMARKED. LOAD CLASS A15 COVERS TO BE USED IN AREAS INACCESSIBLE TO VEHICLES. LOAD CLASS D400 COVERS TO BE USED ELSEWHERE.
 - ROAD GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015 AND BE OF A NON-ROCKING DESIGN WITH LEFT HANDED CAPTIVE HINGE ACCESS AND BE KITEMARKED. LOAD CLASS D400 GRATES TO BE USED THROUGHOUT WITH 450mm SQ. GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 1010mm².
 - YARD GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015 AND BE OF A NON-ROCKING DESIGN AND BE KITEMARKED. LOAD CLASS A15 GRATES TO BE USED IN AREAS INACCESSIBLE TO VEHICLES. GRATES TO BE 300mm SQ. MINIMUM AREA OF WATERWAY TO BE 900mm².
 - RAINWATER DOWNPIPES CONNECTED DIRECT TO DRAIN TO BE CONNECTED USING AN APPROPRIATE ADAPTOR AND REMOVABLE SECTION OF DOWNPIPE TO PERMIT RODDING ACCESS.
 - CLASS 2 BEDDING DETAIL SHALL BE PROVIDED: WHERE COVER TO PIPE BARREL IS: i) <1.2m IN VEHICULAR TRAFFICKED AREAS ii) <0.9m IN AREAS INACCESSIBLE TO VEHICLES. AT ALL ROAD GULLY, YARD GULLY, RWP, SVP AND DRAINAGE CHANNEL BRANCHES. AREAS OF DEEP ROOTING VEGETATION. PIPE RUNS NEAR BUILDINGS IN ACCORDANCE WITH TYPICAL SECTIONS ON AWP DRAWINGS. WHERE TWO PIPES CROSS WITH A CLEAR GAP OF <300mm. CLASS 2 SURROUND TO EXTEND A MINIMUM OF 1.0m FROM THE CENTRE OF THE CROSSING POINT & EXTENDED TO WITHIN 150mm OF THE NEAREST FLEXIBLE JOINT, WHERE REQUIRED.
 - CLASS Y BEDDING DETAIL TO BE PROVIDED WHERE COVER TO PIPE CROWN FROM THE UNDERSIDE OF THE SUB STRUCTURE IS LESS THAN 300mm.
 - PIPE BEDDING MATERIALS TO COMPLY GENERALLY WITH SHW - SERIES 500 - CLAUSE 503. GRANULAR BEDDING MATERIALS TO ALSO COMPLY WITH BS EN 13242 & THE GRANULAR BEDDING MATERIAL TABLE ON THIS DRAWINGS.
 - SELECTED BACKFILL MATERIAL TO BE PROVIDED ABOVE THE PIPE SURROUND TO A HEIGHT OF 300mm MINIMUM ABOVE THE TOP OF THE PIPE. SELECTED BACKFILL MATERIAL TO BE CLASS 8 - LOWER TRENCH FILL MATERIAL IN ACCORDANCE WITH SHW - SERIES 600 TABLE 61 & TO COMPRISE OF UNIFORM SOIL, FREE FROM STONES LARGER THAN 40mm, LUMPS OF CLAY OVER 100mm, TIMBER, FROZEN MATERIAL & VEGETABLE MATTER. SELECTED BACKFILL MATERIAL TO BE PLACED & COMPACTED IN LAYERS NOT EXCEEDING 150mm IN THICKNESS. SHOULD THE MATERIAL BE UNSUITABLE OR WEATHER CONDITIONS AFFECT THE MATERIALS STABILITY, THEN A SUITABLE HARD GRANULAR MATERIAL SHALL BE USED.
 - GENERAL BACKFILL TO DRAINAGE TRENCHES (OTHER THAN FILTER DRAINS) IN VEHICULAR TRAFFICKED AREAS ABOVE THE PIPE BEDDING & SELECTED BACKFILL SHALL BE CLASS 1, 2 OR 3 GENERAL FILL MATERIAL IN ACCORDANCE WITH SHW - SERIES 600.
 - GENERAL BACKFILL UNDER NON-VEHICULAR TRAFFICKED AREAS TO BE SUITABLE AS-DUG MATERIAL COMPACTED IN ACCORDANCE WITH SHW - SERIES 600 IN LAYERS NOT EXCEEDING 225mm. EACH LAYER COMPACTED TO FORM A STABLE TRENCH BACKFILL. SHOULD THE MATERIAL BE UNSUITABLE OR WEATHER CONDITIONS AFFECT THE MATERIALS STABILITY, THEN A HARD GRANULAR MATERIAL SHALL BE USED UP TO FORMATION LEVEL.
 - ALL CONCRETE TO BE DESIGNATED CONCRETE TO CONFORM TO BS 8500-2.
 - NO MECHANICAL COMPACTION OF FILL MATERIAL WITHIN 300mm OF THE CROWN OF ANY PIPE.

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