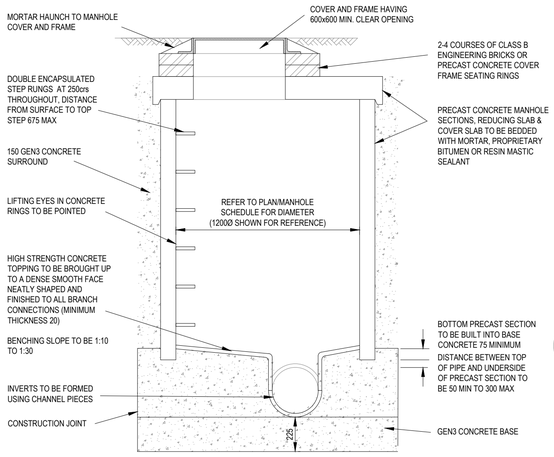
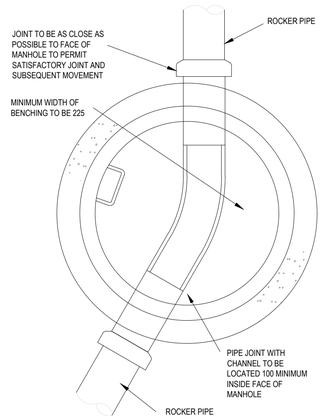
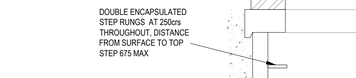




REFER TO PLAN/MANHOLE SCHEDULE FOR PIPE SIZES (225Ø SHOWN FOR REFERENCE)

TYPICAL MANHOLE TYPE B

BASED ON SEWER SECTOR GUIDANCE APPENDIX C (DCG V2.0)
MAXIMUM DEPTH FROM COVER TO SOFFIT OF PIPE 3.0m
(SCALE 1:20)



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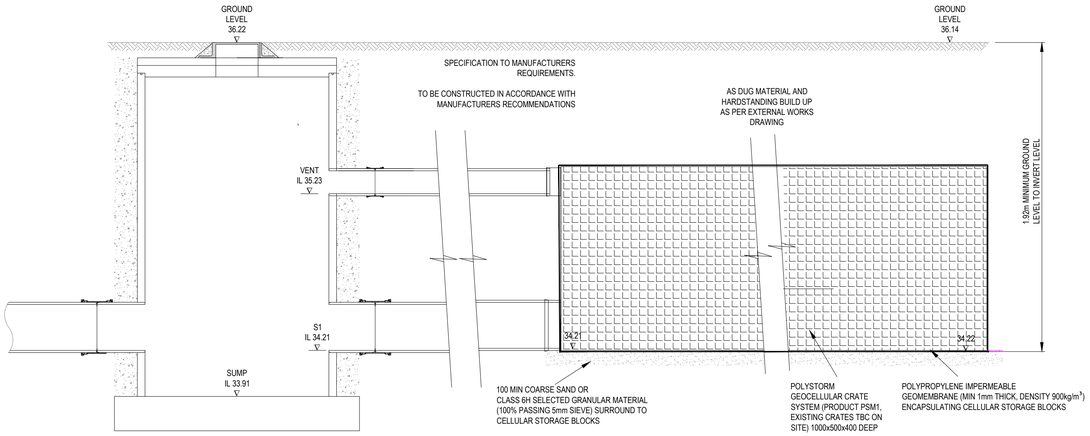
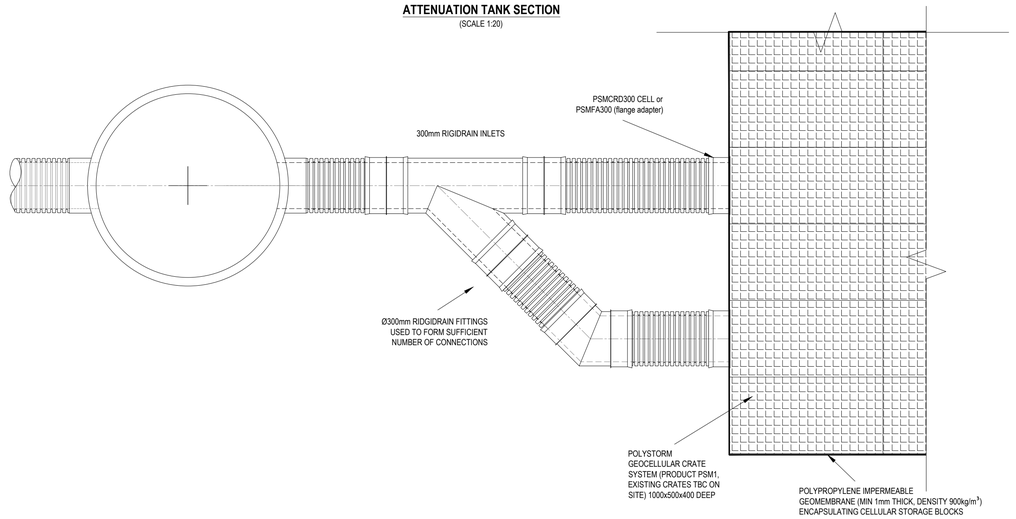


ATTENUATION TANK SECTION
(SCALE 1:20)



ATTENUATION TANK PLAN
(SCALE 1:20)

DRAINAGE NOTES:

1. ALL DRAINAGE WORK TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS, BS EN 752 AND TO THE SATISFACTION OF THE BUILDING INSPECTOR.
2. IN ADDITION, ALL SEWERS INDICATED FOR ADOPTION TO BE BUILT IN ACCORDANCE WITH SEWERS FOR ADOPTION PUBLISHED BY THE WATER SERVICES ASSOCIATION. SEE SEPARATE NOTES.
3. ALL PROPRIETARY ITEMS ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S DETAILS, INSTRUCTIONS & SPECIFICATIONS.
4. ALL EXISTING DRAINS AND SERVICES (LINE AND LEVELS) TO BE CHECKED BY THE CONTRACTOR ON SITE PRIOR TO FINALISING NEW DRAINAGE LINES AND LEVELS.
5. ALL COVER LEVELS ARE APPROXIMATE. EXACT LEVELS TO BE DETERMINED FROM THE EXTERNAL WORKS LAYOUT.
6. INVERT LEVELS QUOTED AT MANHOLES AND INSPECTION CHAMBERS ARE THOSE OF THE LARGEST CONNECTED PIPE DIAMETER. PIPES AT CHAMBERS TO BE LAID WITH SOFFITS LEVEL UNLESS NOTED OTHERWISE.
7. PIPE GRADIENTS WHERE STATED ARE APPROXIMATE.
8. REFER TO ARCHITECT'S DRAWINGS FOR PRECISE LOCATION OF ALL RAINWATER PIPES, INTERNAL CONNECTIONS ETC.
9. ALL INTERNAL CONNECTIONS ARE TO HAVE AN ABOVE-FLOOR ACCESS POINT TO ENABLE FUTURE ACCESS FOR MAINTENANCE.
10. PIPES AND FITTINGS TO BE:
    - PERFORATED VITRIFIED CLAY PIPES FOR LAND DRAINAGE TO BS 1196.
    - CONCRETE PIPES AND ANCILLARY PRODUCTS TO BS 5911-1:2002+AR:2010 AND BS EN 1916:2002.
    - VITRIFIED CLAY PIPES AND FITTINGS TO BS EN 295:2013 (ALL PARTS).
    - DUCTILE IRON TO BS EN 598:2007 & BS ISO 4179:2005.
    - PLASTIC PIPES FOR LAND DRAINAGE TO BS 4962:1982.
    - PLASTIC PIPING SYSTEMS FOR NON-PRESSURE UNDERGROUND DRAINAGE AND SEWAGE TO BS EN 1401 & BS 4660 – SOLID WALL ONLY, STRUCTURED WALL PIPES ARE NOT ACCEPTABLE FOR USE IN DRAINAGE SYSTEMS UNLESS AGREED.
    - PRECAST CONCRETE MANHOLE UNITS TO BS EN 1917:2002.
    - PLASTIC INSPECTION CHAMBERS FOR DRAINS AND SEWERS TO BS EN 13598-1:2010.
    - GULLY AND MANHOLE TOPS FOR VEHICULAR AND PEDESTRIAN AREAS TO BS EN 124:1994.
    - DRAINAGE CHANNELS FOR VEHICULAR AND PEDESTRIAN AREAS TO BS EN 1433:2002.
10. ALL MANHOLE COVERS, ROAD GULLY COVERS AND FRAMES TO COMPLY WITH BS EN124 NON ROCKING TYPE.

    UNLESS NOTED OTHERWISE USE:

CLASS A15	AREAS INACCESSIBLE TO VEHICLES, ACCESSED ONLY BY PEDESTRIANS AND PEDAL CYCLISTS.
CLASS B125	FOOTPATHS, FOOTWAYS, PEDESTRIAN AREAS WITH ONLY OCCASIONAL LIGHT VEHICULAR ACCESS INCLUDING DOMESTIC DRIVEWAYS & SMALL CAR PARKS.
CLASS C250	GULLY TOPS IN CARRIAGEWAY WITHIN 500mm OF KERB AND UP TO 200mm INTO THE FOOTWAY.
CLASS D400	CARRIAGEWAYS, HARD SHOULDERS, PARKING AREAS AND PEDESTRIAN AREAS ACCESSED BY ALL TYPES OF VEHICLES.
CLASS E600	AREAS IMPOSING HIGH WHEEL LOADS SUCH AS INDUSTRIAL ESTATES AND SERVICE YARDS.
CLASS F900	AREAS IMPOSING VERY HIGH WHEEL LOADS SUCH AS AIRCRAFT PAVEMENTS, DOCKS, HEAVY INDUSTRIAL SITES.

11. MANHOLES IN INTERNAL AREAS REQUIRE DOUBLE SEALED COVERS WITH LOCKING SCREWS, RECESSED WHERE REQUIRED TO ACCOMMODATE FLOOR FINISHES TO ARCHITECT'S SPECIFICATION.
12. PIPE BEDDING

    USE CLASS S BEDDING UNLESS NOTED OTHERWISE. NB PROTECT AGAINST CONSTRUCTION TRAFFIC AS NECESSARY

    USE CLASS Z CONCRETE BED & SURROUND OR CONCRETE SLAB PROTECTION AS FOLLOWS:

    - 100 - 600Ø PIPES (CLASS 120 CLAYWARE OR CLASS M CONCRETE)

    FIELDS AND GARDENS - LESS THAN 600mm COVER TO CROWN.

    ROADS - LESS THAN 1200mm COVER TO CROWN

    - 100 - 300Ø PIPES (PLASTIC)

    FIELDS AND GARDENS - LESS THAN 600mm COVER TO CROWN.

    ROADS - LESS THAN 900mm COVER TO CROWN
13. 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 GEN3 CONCRETE BED AND SURROUND CAST INTEGRALLY WITH SLAB.

    OTHERWISE USE CLASS S BEDDING
14. 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
15. BACKFILL TO DRAINS NEAR FOUNDATIONS IS TO BE IN ACCORDANCE WITH BUILDING REGULATIONS H1 DIAGRAMS 8 & 12.

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. 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.
3. ALL DIMENSIONS ARE IN MILLIMETRES.

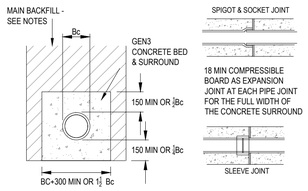
MAIN BACKFILL TO BE IN ACCORDANCE WITH ADJACENT TABLE. FOR THE FOLLOWING CASES:

A. HARDSTANDING AREAS: DETR TYPE 1 GRANULAR MATERIAL

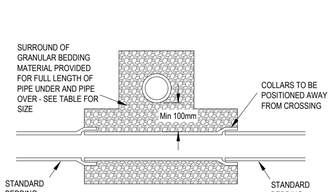
B. SOFT LANDSCAPE AREAS: SELECTED BACKFILL MATERIAL UP TO UNDERSIDE OF TOP-SOIL

PIPE SIZE (mm)	GRANULAR MATERIAL IN ACCORDANCE WITH BS EN 1610 ANNEX B TABLE B.15 - SINGLE SIZED OR GRADED 5mm UP TO MAXIMUM SIZE OF DIAMETER:
100	10
150	14
>150<600	20
> 600	40

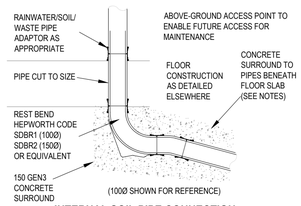
SIZES FOR GRANULAR PIPE BEDDING MATERIAL



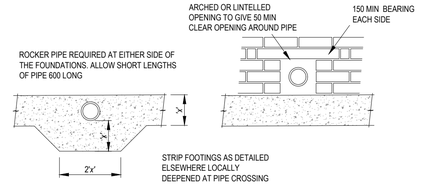
CLASS Z CONCRETE BEDDING & SURROUND
(BEDDING FACTOR 4.5)
GENERALLY SUITABLE FOR ALL SOIL CONDITIONS



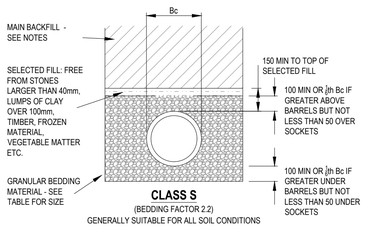
PIPE CROSSINGS
(SCALE 1:20)



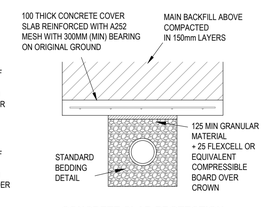
INTERNAL SOIL PIPE CONNECTION
(PIPE RUN BENEATH GROUND FLOOR SLAB)
(SCALE 1:20)



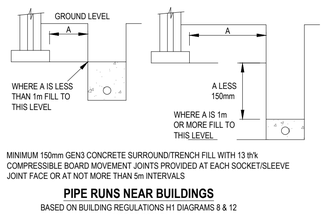
PIPES PASSING THROUGH STRIP FOOTING FOUNDATIONS & SUB-STRUCTURE PERPENDICULAR TO LINE OF WALL
(NOT TO SCALE)



CLASS S
(BEDDING FACTOR 2.2)
GENERALLY SUITABLE FOR ALL SOIL CONDITIONS

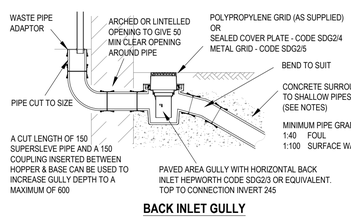


CONCRETE SLAB PROTECTION
GENERALLY SUITABLE FOR ALL SOIL CONDITIONS

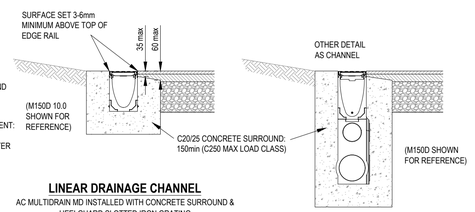


MINIMUM 150mm GEN3 CONCRETE SURROUND/TRENCH FILL WITH 13 th'k COMPRESSIBLE BOARD MOVEMENT JOINTS PROVIDED AT EACH SOCKET/SLEEVE JOINT FACE OR AT NOT MORE THAN 5m INTERVALS

PIPE RUNS NEAR BUILDINGS
BASED ON BUILDING REGULATIONS H1 DIAGRAMS 8 & 12
(NOT TO SCALE)



BACK INLET GULLY
DENOTED BIG ON PLAN
(SCALE 1:20)



LINEAR DRAINAGE CHANNEL
AC MULTIDRAIN MD INSTALLED WITH CONCRETE SURROUND & HEELGUARD SLOTTED IRON GRATING
(SCALE 1:20)

UNIVERSAL SUMP

Rev:	Description:	Date:	By:	Chkd:
C01	UPDATED TO CONSTRUCTION ISSUE	30/07/2021	JTS	AR
P02	FIRST ISSUE	10/02/2021	CJS	DM

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Status: CONSTRUCTION ISSUE

Client: TRINITY CHURCH OF ENGLAND HIGH SCHOOL

Project: TRINITY HIGH SCHOOL

Drg Title: DRAINAGE CONSTRUCTION DETAILS SHEET

Project No:	Size:	Date:	Drawn By:	Designed By:	Checked By:
076665	A1	09/02/2021	CJS	CJS	DM
	Scale: AS SHOWN				

Project Code:	Originator:	Zone:	Level:	Type:	Discipline:	Category / Number:	Rev:
THS	- CUR -	XX -	ZZ -	DR -	C -	92002	- C01

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