



LIMITS OF COVER IN ANY WIDTH OF TRENCH

NOMINAL SIZE	LAI IN FIELDS	LAI IN LIGHT ROADS	LAI IN MAIN ROADS
CLASS 120 CLAYWARE PIPES (CLASS B BEDDING)			
100-150mm	0.6m - 8.0m	1.2m - 8.0m	1.2m - 8.0m
225mm	0.6m - 5.0m	1.2m - 5.0m	1.2m - 4.5m
400mm	0.6m - 4.5m	1.2m - 4.5m	1.2m - 4.0m
600mm	0.6m - 4.5m	1.2m - 4.5m	1.2m - 4.0m
CLASS M CONCRETE PIPES (CLASS B BEDDING)			
300mm	0.6m - 3.0m	1.2m - 3.0m	1.2m - 2.5m
450mm	0.6m - 3.5m	1.2m - 3.5m	1.2m - 2.5m
600mm	0.6m - 3.5m	1.2m - 3.5m	1.2m - 3.0m
THERMOPLASTIC PIPES (CLASS S BEDDING)			
100 - 300mm	0.6m - 7.0m	0.9m - 7.0m	0.9m - 7.0m

WHERE COVER IS LESS THAN THE ALLOWABLE DEPTH PIPES TO HAVE CLASS Z CONCRETE SURROUND OR CONCRETE COVER SLAB PROTECTION

MANUFACTURER	PRODUCT NAME	MATERIAL	MAX DEPTH
Naylor	Plastic Inspection Chamber	Polypropylene	Up to 1200mm
Hepworth	PPIC	Polypropylene	Up to 1200mm
Uponor	Inspection Chamber (450mm)	Polypropylene	Up to 1200mm
Marshalls	Inspection Chamber to BS5911 pt2	Precast concrete	Up to 1000mm
Wavin	Osma Ultradrain Inspection Chamber	Polypropylene	Up to 1200mm
Wavin	OsmaDrain Universal Inspection Chamber	Polypropylene	Up to 1200mm
Wavin	Non Entry Inspection Chamber	Polypropylene	Up to 2000mm
Marley	Inspection Chamber (450mm)	Polypropylene	Up to 1200mm
Polypipe	110mm Inspection Chamber (460mm)	Polypropylene	Up to 1200mm

CONCRETE PROTECTION

CLASS 1 SULPHATE CONDITIONS	GEN3 OR GEN 3
ADAPTABLE STANDARDS AND AREAS SUBJECT TO HEAVY LOADING	GEN3 OR GEN 3
AREAS SUBJECT TO LIGHT LOADING eg. PRIVATE DRIVES, SMALL CAR PARKS	GEN1 OR S72

FOR BURIED CONCRETE EXPOSED TO SULPHATE CONDITIONS

CLASS 2	FND 2
CLASS 3	FND 3
CLASS 4A	FND 4A
CLASS 4B	FND 4B

GENERAL NOTES

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- LOCATIONS OF ALL EXISTING SERVICES ON-SITE TO BE CONFIRMED & PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORKS.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PATRICK PARSONS LTD DRAWINGS & SPECIFICATIONS.

DRAINAGE NOTES

- ALL BUILDING DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT BRITISH/EUROPEAN STANDARDS BS EN 124 (SUPERSEDED BY BS 801 'BUILDING DRAINAGE'), THE CURRENT BUILDING REGULATIONS AND THE LOCAL AUTHORITY BUILDING CONTROL OR WHIC SPECIFICATIONS AND REQUIREMENTS.
- ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH 'SEWERS FOR ADOPTION' 6th EDITION AND LOCAL WATER AUTHORITY REQUIREMENTS AND REQUIREMENTS.
- INSITU AND PRECAST CONCRETE UNITS SHALL HAVE SULPHATE RESISTING PORTLAND CEMENT TO BS 4027 UNLESS AGREED OTHERWISE WITH THE ADOPTING AUTHORITY.
- PRECAST CONCRETE MANHOLES TO BE IN ACCORDANCE WITH BS 5911:PART 200. PRECAST CONCRETE RINGS AND COVER SLABS TO CONCRETE PIPES TO BE CLASS H AND BE JOINTED WITH CEMENT MORTAR UNLESS NOTED OTHERWISE.
- VERIFIED CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 295 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN 295 PIPE CRUSHING STRENGTH.
- MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124 AND HAVE 150mm DEEP FRAMES UNLESS NOTED OTHERWISE. THEY WILL ALSO HAVE 600x600mm CLEAR OPENINGS UNLESS OTHERWISE SPECIFIED AND BE OF A NON-ROCKING DESIGN WITHOUT UNION INSERTS. LOAD CLASS D400 IN VEHICULAR TRAFFICED AREAS AND LOAD CLASS B125 IN FOOTWAYS AND PAVEMENT AREAS. ALL COVERS TO BE BAGED 'TM' OR 'SM' AS APPROPRIATE. MANHOLE COVERS AND ACCESS TO BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION TECHNICAL BULLETIN ISSUED SEPTEMBER 2001.
- WHERE THERE IS LESS THAN 1.8m HEADROOM IN MANHOLES AND THE MANHOLE DIAMETER > 1.2m, COVER AND FRAME TO BE HEAVY DUTY TWIN 600x600mm DOUBLE TRIANGULAR COVERS, WITH A CLEAR ACCESS OPENING OF 1200x750mm.
- GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124 AND BE OF A NON-ROCKING DESIGN WITH CAPTIVE WING ACCESS AND BE KITEMARKED. LOAD CLASS D400 FOR ROADS REGULARLY CARRYING FAST MOVING VEHICLES. CLASS C250 TO BE USED IN LESSER TRAFFICED AREAS eg. ESTATE ROADS, CUL-DE-SACS, RESIDENTIAL CAR PARKING AREAS ETC. TYPE D400-450 GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 10100mm². TYPE C250-450 GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 9000mm².
- SEWERS TO BE LAID IN CLASS 'S' BEDDING (150mm GRANULAR BED & SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NONE VEHICULAR AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED & SURROUND.
- INTERNAL PIPE RUNS TO BE LAID WITH A CONCRETE BED AND SURROUND.
- SELECTED BACKFILL MATERIAL SHALL CONSIST OF UNIFORM SOIL, FREE FROM STONES LARGER THAN 40mm, TREE ROOTS, ORGANIC MATTER AND FROZEN SOIL. ALTERNATIVELY CLASS 6/1 CAPPING LAYER CAN BE USED (SEE NOTE 11).
- GENERAL BACKFILL MATERIAL SHALL MEET THE REQUIREMENTS OF NOTE 11 AND SHALL BE PLACED IN LAYERS NOT EXCEEDING 150mm. EACH LAYER TO BE WELL COMPACTED TO FORM A SUITABLE TRENCH BACKFILL. ALTERNATIVELY CLASS 6/1 CAPPING LAYER CAN BE USED.
- BACKFILL AND REINSTATEMENT TO TRENCHES IN HIGHWAYS TO BE IN ACCORDANCE WITH 'THE STREET WORKS REGULATIONS - 1992' AND RELEVANT PROVISIONS OF H.A.U.C. 'SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS' BOTH UNDER SECTION 73 OF THE NEW ROADS AND STREET WORKS ACT 1991.
- ALL DIMENSIONS INDICATED ARE MINIMUM.
- ALL DRAINAGE WORK TO COMMENCE AT OUTFALL AND PROCEED UPSTREAM.
- ALL DRAINAGE GOODS SHALL BE KITE MARKED.
- FOR SANITARY PIPEWORK BUILDING REQUIREMENTS, PLEASE REFER TO PAGES 8-10 OF PART 1 OF THE VENTILATION REGULATIONS.

Revisions

Rev.	Amendments	Date	By
P1	INITIAL ISSUE	17.08.18	TB

Client

PLANNED CONTRACTS LTD

Project

**BUILDING 2
JOSEPH PRIESTLEY
ENTERPRISE CENTRE, BIRSTALL**

Drawing

TYPICAL DRAINAGE DETAILS

Scales 1:20 At original size A1

Drawn TB

Date AUG 2018

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