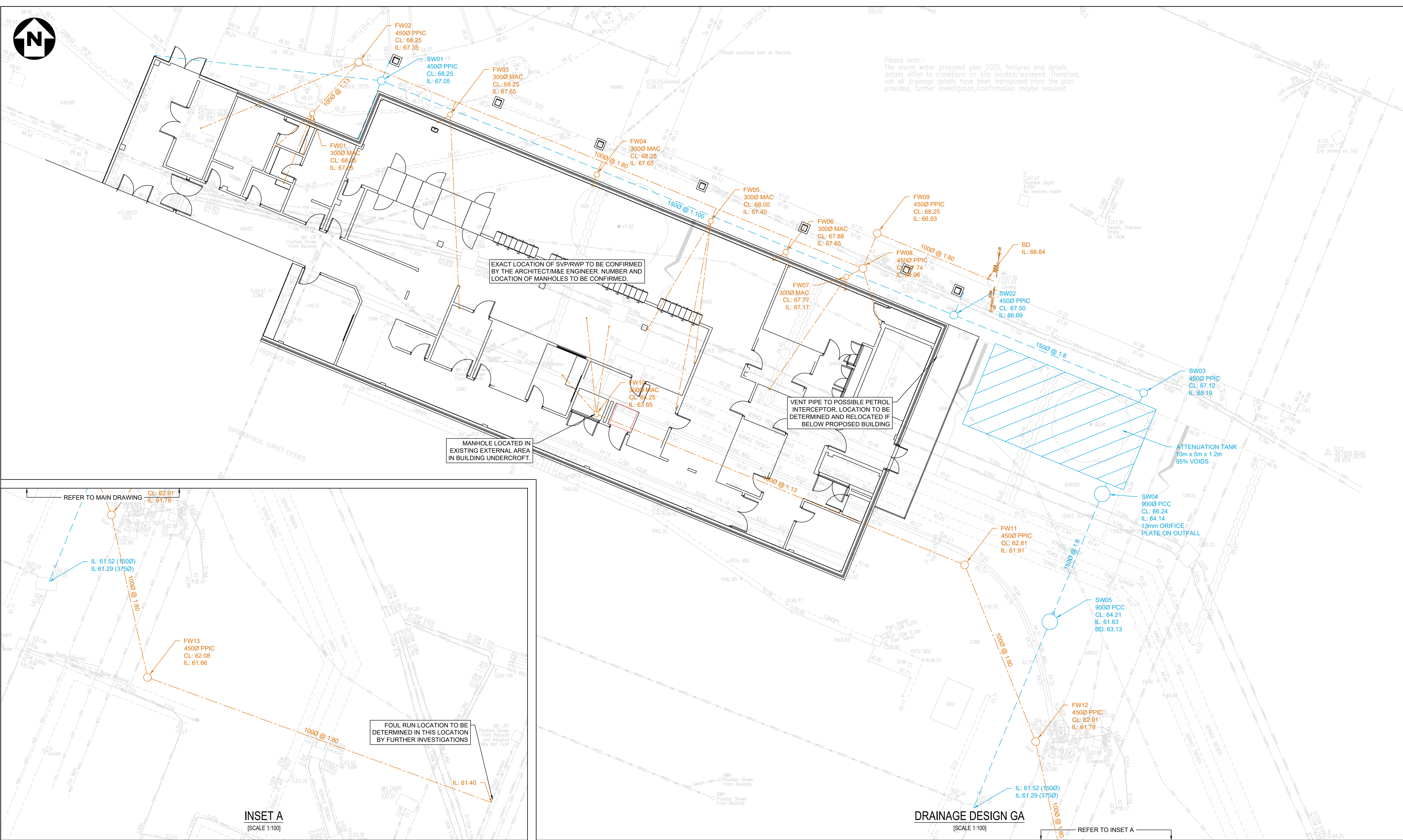




SURFACE WATER DRAINAGE STRATEGY

THE PROPOSED DEVELOPMENT IS TO BE DRAINED VIA SEPARATE FOUL AND SURFACE WATER DRAINAGE SYSTEMS.

THE SURFACE WATER DRAINAGE PROPOSALS HAVE BEEN DESIGNED IN ACCORDANCE WITH BS EN 752-4 AND THE BUILDING REGULATIONS APPROVED DOCUMENT H (2010), WHICH INDICATES THE FOLLOWING HIERARCHY FOR THE DISPOSAL OF SURFACE WATER DRAINAGE FROM DEVELOPMENT SITES:

- DISCHARGE VIA INFILTRATION;
- DISCHARGE TO WATERCOURSE;
- DISCHARGE TO SEWER.

THESE OPTIONS ARE DISCUSSED IN FURTHER DETAIL BELOW.

SURFACE WATER DISCHARGE VIA INFILTRATION

AN INTRUSIVE SITE INVESTIGATION HAS BEEN COMPLETED. FROM THE SURVEY THE NEAR SURFACE GROUND CONDITIONS HAVE BEEN CONFIRMED MADE GROUND TO 3m AND BELOW THAT AS GLACIAL TILL. ON THIS BASIS THE USE OF INFILTRATION / SOAKAWAYS ARE LIKELY NOT VIABLE.

SURFACE WATER DISCHARGE VIA WATERCOURSE

GIVEN THE ABOVE IT WOULD NEXT BE TO DISCHARGE TO A WATERCOURSE, HOWEVER THE CLOSEST TO THE SITE IS THE PENDLEBURY BROOK, 850m AWAY, THROUGH MULTIPLE HOUSES AND A GOLF COURSE. IT IS UNLIKELY THAT THIS WOULD BE FEASIBLE.

SURFACE DISCHARGE VIA THE PUBLIC SEWERAGE SYSTEM

GIVEN THE ABOVE IT WOULD BE NECESSARY TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT TO THE PUBLIC DRAINAGE SYSTEM. THIS WOULD MEAN THAT THE SYSTEM WOULD CONNECT TO THE NEARBY PRIVATE SYSTEM ALREADY IN PLACE AT THE SITE.

IN LINE WITH MODERN DESIGN STANDARDS FOR SURFACE WATER DRAINAGE SYSTEMS, THE PROPOSALS HAVE BEEN FORMULATED TO ENSURE THERE WILL BE:-

- NO SURCHARGING OF SEWERS FOR THE CRITICAL 1 IN 1 YEAR STORM EVENT.
- NO SURFACE FLOODING FOR THE CRITICAL 1 IN 30 YEAR EVENT.
- NO SURFACE FLOODING THAT MAY AFFECT BUILDINGS ON OR OFF SITE FOR THE CRITICAL 1 IN 100 YEAR EVENT INCLUDING A 45% CLIMATE CHANGE ALLOWANCE.

THE FLOW RATE DETERMINED FOR THE SITE WAS BASED ON GREENFIELD RUN-OFF. HOWEVER DUE TO THE SIZE OF THE SITE (770m²) THE RATE WAS DETERMINED TO BE 0.44s. WHILE THIS CAN PRACTICALLY BE DONE WITH AN ORIFICE PLATE OF 130mm, THE REALITY IS THAT THIS WOULD BE PRONE TO BLOCKAGE. EITHER A ROBUST UPSTREAM SKIDEDS COLLECTION SYSTEM (DOWNSTREAM DEFENDER ETC.) WOULD NEED TO BE IN PLACE, OR A LARGER ORIFICE (AND THEREFORE A LARGER DISCHARGE RATE) WOULD NEED TO BE INSTALLED.

MAINTENANCE OF THE BELOW GROUND DRAINAGE SYSTEM

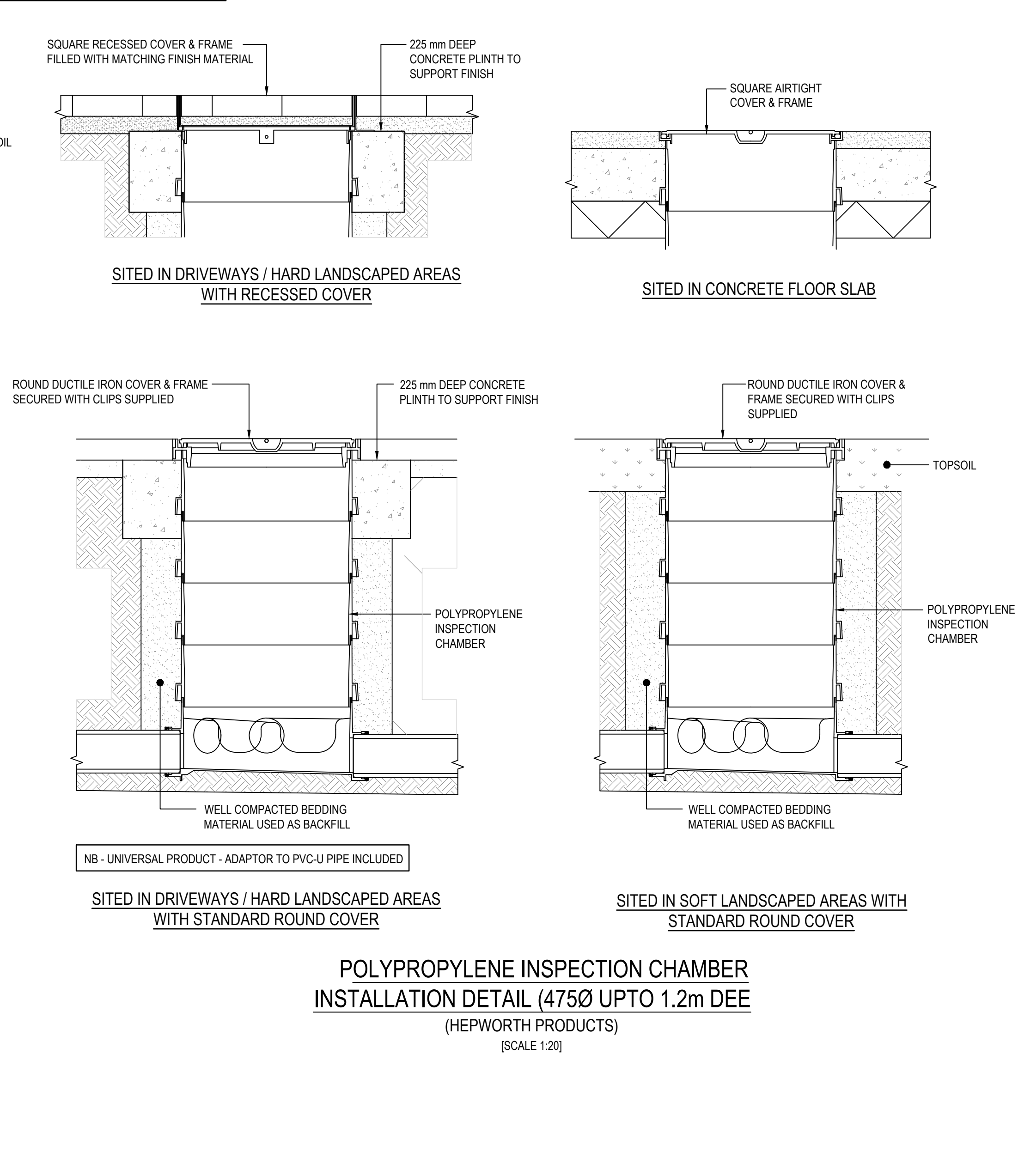
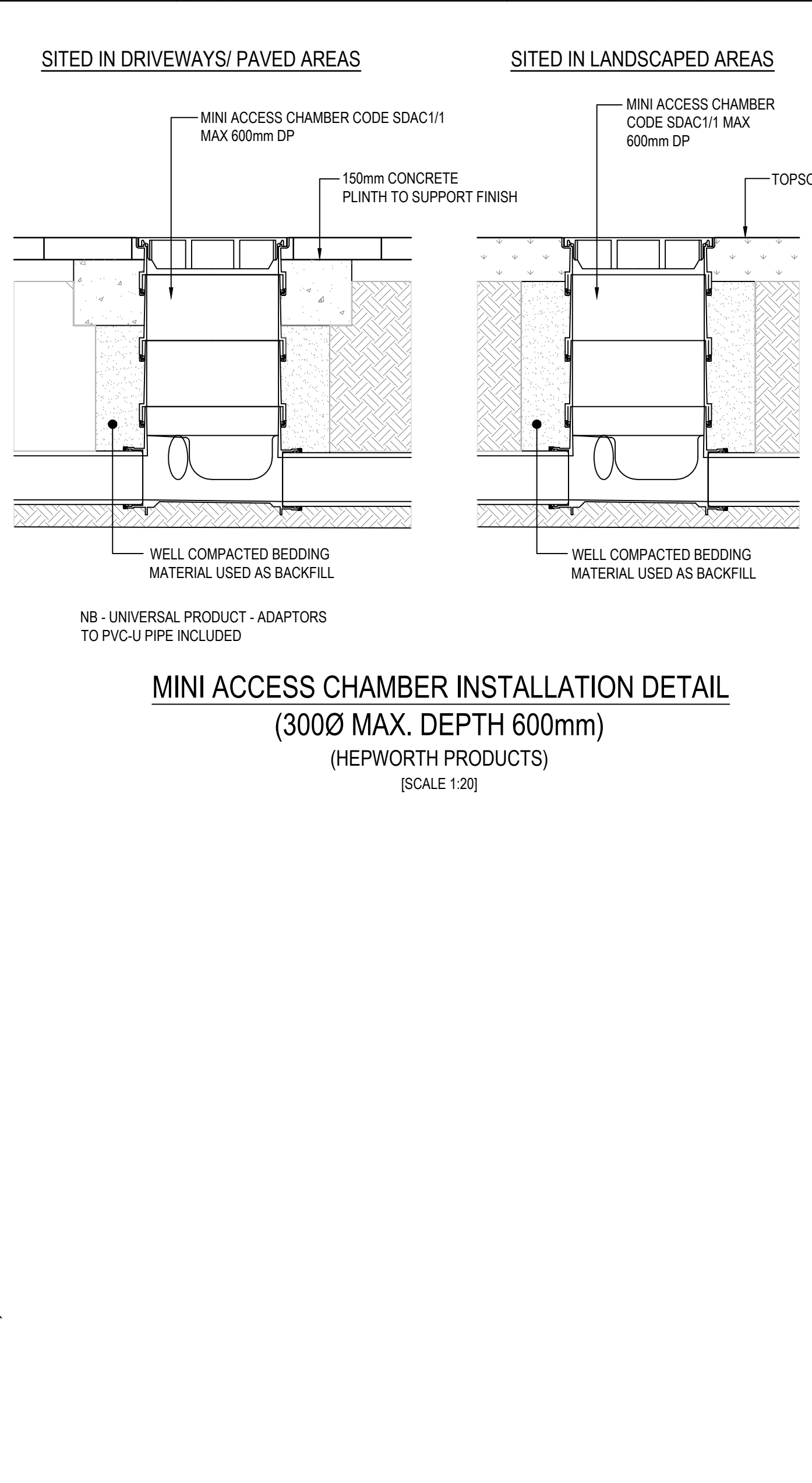
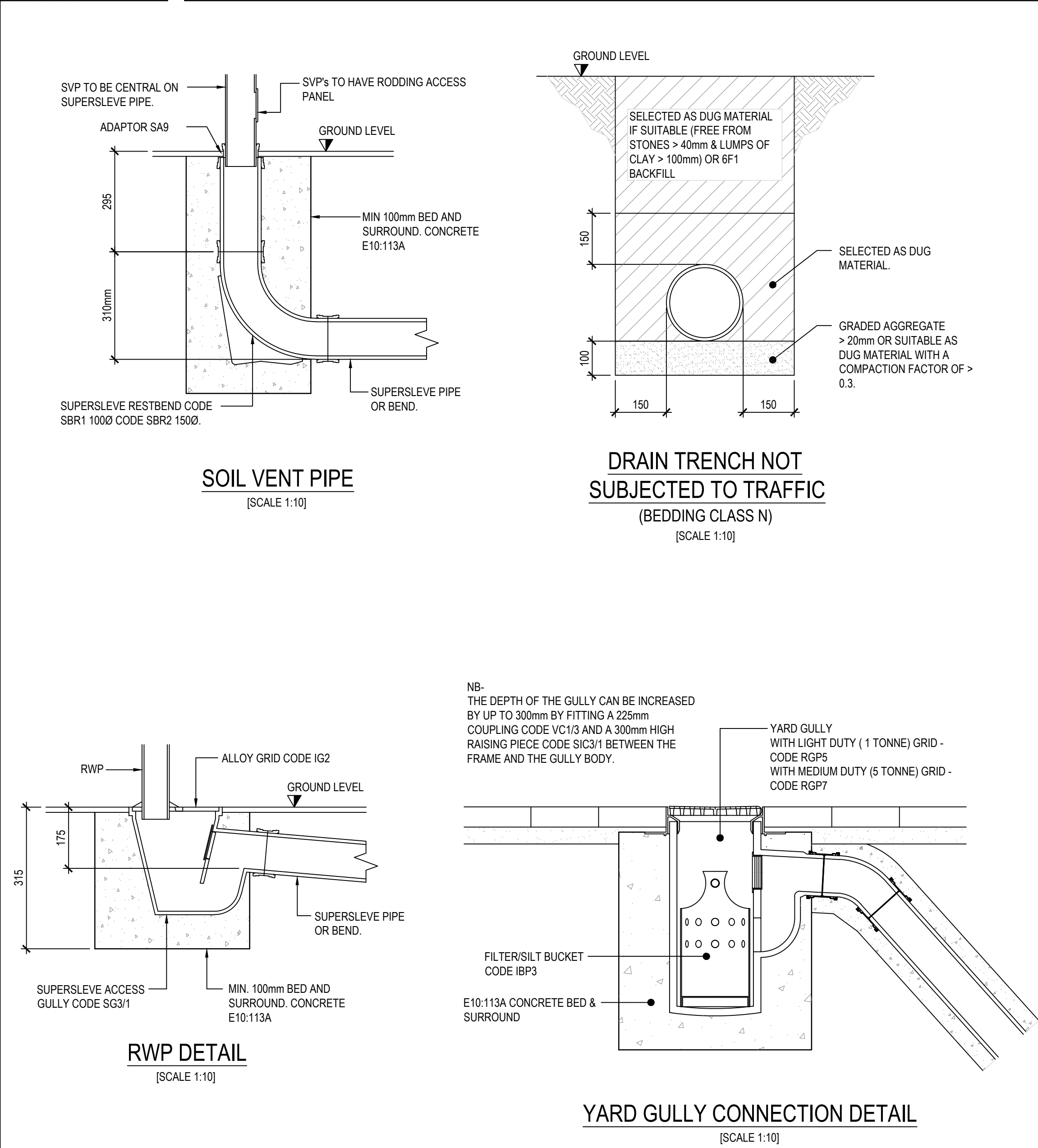
THE BELOW GROUND FOUL AND SURFACE WATER DRAINAGE PROPOSALS INDICATED ARE RELATIVELY TRADITIONAL IN NATURE, AND SHOULD PROVIDE YEARS OF RELATIVELY LOW MAINTENANCE OPERATION IN RELATION TO THE ANTICIPATED LIFESPAN OF THE PROPOSED DEVELOPMENT.

IN LINE WITH CURRENT GOOD PRACTICE:-

- GULLIES AND LINEAR DRAINAGE CHANNELS SHOULD BE INSPECTED AND / OR CLEANED OUT AT 6 MONTHLY INTERVALS.
- INSPECTION CHAMBERS, MANHOLES, CATCHPITS, ETC. SHOULD BE INSPECTED AT 6 MONTHLY INTERVALS TO ENSURE THAT THE PIPEWORK AND INFILTRATION DEVICES ASSOCIATED WITH THEM ARE OPERATING EFFECTIVELY.

ANY PROBLEMS HIGHLIGHTED BY THESE INSPECTIONS WILL NEED TO BE INVESTIGATED, POSSIBLY BY CCTV SURVEY, TO CONFIRM THE NATURE OF THE PROBLEM AND TO ALLOW IT TO BE REMEDIED IN A TIMELY MANNER.

IT IS UNDERSTOOD THAT THE MONITORING AND ROUTINE MAINTENANCE OF THE BELOW GROUND DRAINAGE SYSTEM WILL BE CARRIED OUT BY THE OCCUPIERS MAINTENANCE STAFF WITH ADDITIONAL HELP PROVIDED BY EXTERNAL SPECIALIST DRAINAGE PROFESSIONALS BROUGHT IN AS REQUIRED.



POLYPROPYLENE INSPECTION CHAMBER
INSTALLATION DETAIL (4750 UPTO 1.2m DEE
(HEPWORTH PRODUCTS)
[SCALE 1:20]

WML Job No.	Drawn	Checked	Date	Scale
9163	RH	NB	NOVEMBER 2022	AS SHOWN

GENERAL NOTES

DO NOT SCALE FROM THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY.

NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PRIOR PERMISSION IN WRITING.

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.

FOR DETAILS OF MATERIALS AND WORKMANSHIP REFER TO THE SPECIFICATION.

THE CONTRACTOR IS RESPONSIBLE FOR CHECKING INVERT LEVELS AND POSITIONS OF ALL EXISTING DRAINS, SEWERS, INSPECTION CHAMBERS AND MANHOLES SHOWN ON THIS DRAWING IMMEDIATELY ON SITE ESTABLISHMENT. ANY DISCREPANCIES MUST BE REPORTED TO WML CONSULTING IMMEDIATELY.

WHERE THE NEW SITE DRAINAGE CONNECTS IN TO EXISTING MANHOLES IN CARRIAGEWAYS AND / OR EXISTING ADOPTED SEWERS, THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISON WITH THE RELEVANT STATUTORY UNDERTAKER AND LOCAL AUTHORITY WITH REGARD TO ROAD CLOSURES, TRAFFIC MANAGEMENT, PERMITS TO WORK, SUBMISSION OF CONTRACTORS METHOD STATEMENTS AND RISK ASSESSMENTS AND OTHER DOCUMENTATION AND CORRESPONDENCE ASSOCIATED WITH THE SITE STAGE (PART 2) ELEMENT OF THE WORKS.

ROCKER PIPES TO BE PROVIDED AT ALL CONCRETE CASED INTERFACES.

PROVIDE ADEQUATE PROTECTION TO MAINTAIN MINIMUM COVER TO DRAINS DURING THE CONSTRUCTION PERIOD.

COVER LEVELS ON THIS DRAWING ARE APPROXIMATE AND INDICATIVE ONLY ARCHITECT TO CONFIRM EXACT LOCATION OF MANHOLES AND GULLIES PRIOR TO CONSTRUCTION.

THE LAYOUT OF DRAINAGE ON THIS DRAWING IS INDICATIVE ONLY ARCHITECT TO CONFIRM EXACT LOCATION OF MANHOLES AND GULLIES.

U.N.O. ALL DRAINAGE GOODS & FITTINGS TO BE:-

- UPTO 225 DIA (AND INCLUDING) TO BE SUPERSLEVE VITRIFIED CLAY PIPES OR EQUIVALENT.
- 300 DIA AND ABOVE TO BE CONCRETE BY STANTON BONNA OR EQUIVALENT.

ALL COVERS AND RODDING ACCESS POINTS TO BE SEALED AND SCREWED TIGHT.

ALL INTERNAL MANHOLE COVERS TO BE DOUBLE SEALED, LOCKABLE AND RECESSED TO ACCEPT FLOOR FINISHES WHERE APPLICABLE.

SETTING OUT OF ALL INTERNAL GULLY / PLUMBING CONNECTIONS TO BE CO-ORDINATED BETWEEN THE SERVICE ENGINEERS AND THE ARCHITECT.

ALL INTERNAL GULLIES, PLUMBING CONNECTIONS, SOIL STACKS, SVPS AND ALL OTHER CONNECTIONS OF FOUL AND SURFACE WATER DRAINS TO BELOW GROUND TO BE FITTED WITH ACCESSIBLE RODDING POINTS ABOVE SLAB LEVEL.

ALL SURFACE WATER CONNECTIONS TO BE 150mm DIAMETER AT MINIMUM FALLS OF 1:100 UNLESS NOTED OTHERWISE.

ALL FOUL WATER CONNECTIONS TO BE 100mm DIAMETER AT MINIMUM FALLS OF 1:40 UNLESS NOTED OTHERWISE.

ALL CONNECTIONS TO BE MADE IN ACCORDANCE WITH STANDARD DETAIL DRAWINGS.

ALL PIPEWORK TO BE INSTALLED WITH SOFFITS LEVEL (E.G. AT CHANGES IN PIPE SIZE) U.N.O.

ON COMPLETION OF DRAINAGE WORKS, THE NEW DRAINAGE SYSTEM IS TO BE THOROUGHLY CLEANED AND A CCTV SURVEY CARRIED OUT TO CONFIRM NO CONSTRUCTION DEBRIS OR BLOCKAGES REMAIN.

CONNECTIONS TO CARRIER DRAINS ARE TO BE "Y" JUNCTIONS.

ALL PRIVATE DRAINAGE IS TO COMPLY WITH BS EN 752 AND BUILDING REGS. PART H.

MANHOLE COVERS IN VEHICULAR AREAS TO BE EN124 CLASS D400, IN NON - VEHICULAR AREAS TO BE EN124 CLASS C250.

SURROUNDING / OVERLAYING FILL TO SOAKAWAY TANKS TO COMPRISE CLEAN IMPORTED GRANULAR MATERIAL.

PLANNING

Rev.	Amendment	29.11.22	RH	NB
P01	PRELIMINARY ISSUE.			

Project: DECONTAMINATION DEPARTMENT WHISTON HOSPITAL

CLIENT: HALLIDAY MEECHAM

Title: DRAINAGE DESIGN GA & DRAINAGE DETAILS

WML Job No.	Drawn	Checked	Date	Scale
9163	RH	NB	NOVEMBER 2022	AS SHOWN

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