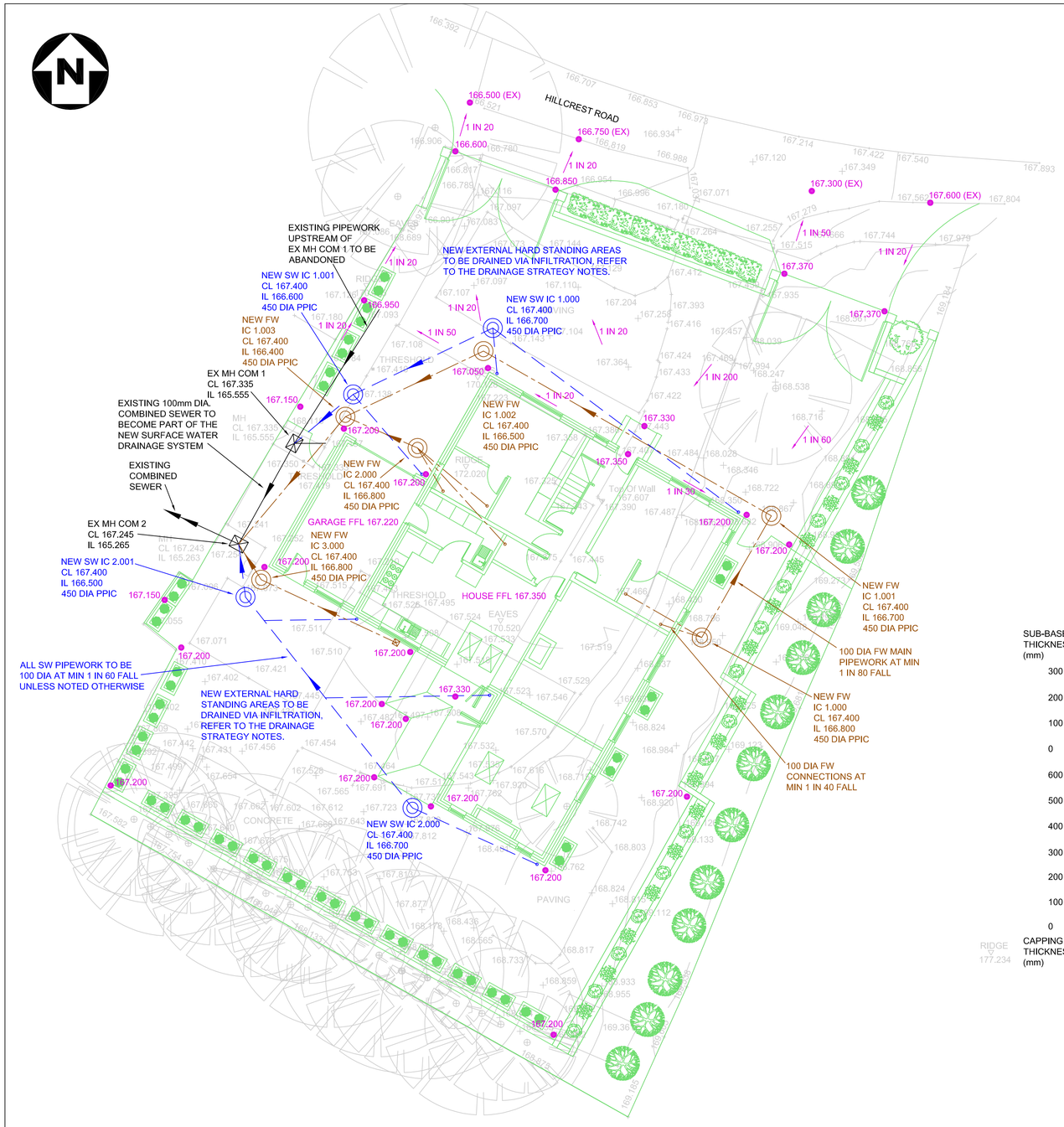
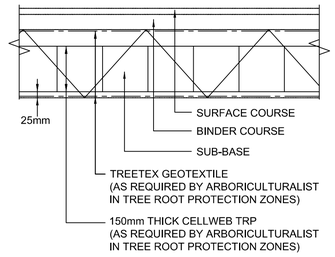




ALL WORKS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF BS594987:2010 GENERALLY.

SURFACE COURSE	POROUS RESIN SURFACING TO ARCHITECTS SPEC.
BINDER COURSE	70mm THICK AC20 BIN PA
GRANULAR SUB-BASE	MIN 350mm CLEAN ANGULAR STONE TYPE 4/20
ASSUMED CBR	2.5% (SUBJECT TO CONFIRMATION OF CBR TESTS BY SITE INVESTIGATION SPECIALIST)

ADDITIONAL FILLING REQUIRED TO SUIT PROPOSED LEVELS TO USE TYPE 3 SUB-BASE OR CLEAN ANGULAR STONE TYPE 4/20.

NOTE:
ALL MATERIAL WITHIN 450mm OF SURFACE LEVEL TO BE NON-FROST SUSCEPTIBLE.

POROUS SURFACING CONSTRUCTION

SUB-BASE / CAPPING CBR TABLE

SURFACE WATER DRAINAGE STRATEGY

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:-

1. DISCHARGE VIA INFILTRATION;
2. DISCHARGE TO WATERCOURSE;
3. DISCHARGE TO SEWER.

THESE OPTIONS ARE DISCUSSED IN FURTHER DETAIL BELOW.

SURFACE WATER DISCHARGE VIA INFILTRATION

FROM THE RECENT INTRUSIVE SITE INVESTIGATION THE GROUND CONDITIONS CAN BE SUMARISED AS A VARIED MIX OF CLAY AND SAND.

GIVEN THIS, AND THE FACT THAT THERE IS INSUFFICIENT SPACE TO ADHERE TO THE 5m MINIMUM DISTANCE RULE BETWEEN BUILDINGS / THE SITE BOUNDARY AND A SOAKAWAY DEVICE, IT IS CONSIDERED THAT THE SURFACE WATER RUNOFF FROM THE PROPOSED ROOF AREA WILL NOT BE ABLE TO BE DISCHARGED VIA A CONCENTRATED SOAKAWAY DEVICE.

HOWEVER IT IS PROPOSED THAT THE NEW EXTERNAL HARDSTANDING AREAS SHOULD BE DRAINED VIA INFILTRATION, UTILISING POROUS SURFACING CONSTRUCTION.

THE EXISTING SITE HAS AN IMPERMEABLE AREA OF APPROX. 370m sq, WHEREAS THE PROPOSED ROOF AREA IS APPROX 190m sq.

HENCE THE PROPOSED DEVELOPMENT WILL PROVIDE AN APPROX 50% REDUCTION IN THE AREA THAT DRAINS OFF SITE.

SURFACE WATER DISCHARGE VIA WATERCOURSE

THERE ARE NO WATERCOURSES WITHIN OR ADJACENT TO THE SITE, HENCE IT WILL NOT BE FEASIBLE TO DISCHARGE THE SURFACE WATER RUNOFF TO A WATERCOURSE.

SURFACE WATER DISCHARGE VIA THE PUBLIC SEWERAGE SYSTEM

AS OUTLINED ABOVE IT IS PROPOSED TO DISCHARGE THE SURFACE WATER RUNOFF FROM ONLY THE PROPOSED ROOF AREA TO THE PUBLIC SEWER NETWORK.

SURFACE WATER DRAINAGE SYSTEM DESIGN CRITERIA

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

1. NO SURCHARGING OF SEWERS FOR THE CRITICAL 1 IN 1 YEAR STORM EVENT.
2. NO SURFACE FLOODING FOR THE CRITICAL 1 IN 30 YEAR EVENT.
3. NO SURFACE FLOODING THAT MAY AFFECT BUILDINGS ON OR OFF SITE FOR THE CRITICAL 1 IN 100 YEAR EVENT INCLUDING A 40% CLIMATE CHANGE ALLOWANCE.

MAINTENANCE OF THE BELOW GROUND DRAINAGE SYSTEM

THE 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 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 RESIDENTS WITH ADDITIONAL HELP PROVIDED BY EXTERNAL SPECIALIST DRAINAGE PROFESSIONALS BROUGHT IN AS REQUIRED.
- THE AREAS OF POROUS SURFACING SHOULD BE REGULARLY SWEPT, VACUUMED OR BLOWN TO REMOVE LEAVES AND OTHER DEBRIS THAT MAY LEAD TO THE PORES WITHIN THE SURFACING BECOMING BLOCKED. IT IS ANTICIPATED THAT THIS CLEANING WILL BE REQUIRED TWICE PER YEAR, HOWEVER THE EFFECTIVENESS OF THIS CLEANING FREQUENCY WILL NEED TO BE MONITORED, AND MAY NEED TO BE INCREASED. AREAS OF POROUS SURFACING SHOULD NOT BE USED FOR THE STORAGE OF ANY MATERIALS THAT MAY CLOG THE PORES WITHIN THE SURFACING. SIMILARLY THE USE OF SAND OR OTHER NON-SOLUBLE MATERIALS FOR SNOW AND ICE CONTROL SHOULD BE AVOIDED. IT IS ANTICIPATED THAT THE EXTERNAL AREAS OF THE SITE WILL BE ROUTINELY INSPECTED AND MAINTAINED BY THE RESIDENTS, THOUGH IT MAY BE NECESSARY TO CALL IN EXTERNAL SPECIALIST CONTRACTORS IF VACUUMING OF THE SURFACINGS ARE REQUIRED.

TENDER

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.

THE CONTRACTOR SHALL INCORPORATE ALL THE REQUIREMENTS OF THE PRE-TENDER STAGE HEALTH AND SAFETY PLAN.

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 COVER LEVELS TO ALL 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.

UNLESS NOTED OTHERWISE PIPEWORK AND FITTINGS TO BE:-
- UPTO 225 DIA (AND INCLUDING) TO BE SUPERSLEVE VITRIFIED CLAY PIPES OR SIMILAR.
- 300 DIA AND ABOVE TO BE CONCRETE BY STANTON BONNA OR SIMILAR.

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

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 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.

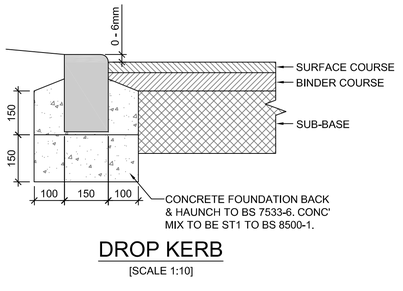
ALL PRIVATE DRAINAGE IS TO COMPLY WITH BS EN 752 AND BUILDING REGS. PART H.

PIPE GRADIENTS ARE INDICATIVE MINIMUMS.

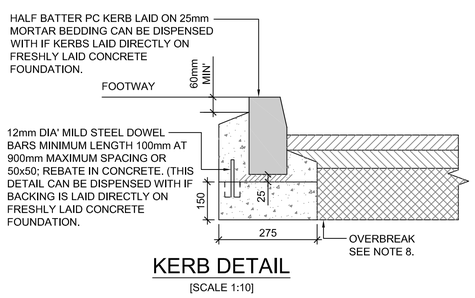
SURFACE CHANNEL DRAINS TO BE ACO MULTIDRAIN OR SIMILAR.

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

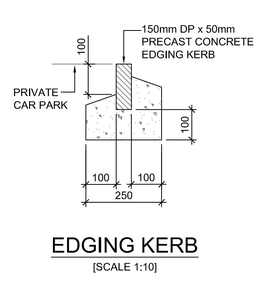
REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF ANY MANHOLE COVERS WHICH REQUIRE INSET PANELS.



DROP KERB
[SCALE 1:10]



KERB DETAIL
[SCALE 1:10]



EDGING KERB
[SCALE 1:10]

NOTES:

1. CONCRETE BEDDING AND BACKING SHALL BE TYPE ST1 TO BS 8500-1.
2. KERBS SHALL COMPLY WITH BS EN 1340.
3. CEMENT SHALL BE ORDINARY PORTLAND CEMENT TO BS EN 197-1.
4. JOINTS TO KERBS SHALL BE POINTED WITH CLASS (iii) MORTAR.
5. CUT LENGTHS OF KERBS ARE TO BE CUT USING A DISC CUTTER MIN. LENGTH 450mm.
6. IN THE CASE OF NEW CARRIAGEWAY CONSTRUCTION THE SUB BASE LAYER IS EXTENDED 300mm BEYOND THE BACK OF KERB FOUNDATION THE CONTRACTOR SHALL ALLOW FOR FILLING IN BETWEEN THE ROAD SUB BASE AND THE FOOTWAY FORMATION WITH SUB BASE MATERIAL IN THE RATE FOR KERBING.
7. RECONSTRUCTION OF EXISTING CARRIAGEWAY CHANNEL MEASURED SEPARATELY.
8. KERBS LAID IN EXISTING CARRIAGEWAY FORMATION-RATE TO INCLUDE INFILL OF OVERBREAK IN FRONT OF KERB WITH CONCRETE TYPE ST.1 TO BINDER COURSE FINISH LEVEL.

Rev.	Amendment	Date	By	Chkd
T01	AMENDED TO SUIT UPDATED SITE LAYOUT AND SURFACING PROPOSALS. LEVELS AND DETAILS ADDED. ISSUED FOR TENDER.	22.03.22	KPT	AW
P02	AMENDED TO SUIT ARCHITECTS COMMENTS.	02.02.22	KPT	AW
P01	PRELIMINARY ISSUE	27.01.22	KPT	AW

Project
THE BUNGALOW
ROCHDALE

Client
MR M FARDON

Title
PROPOSED DRAINAGE LAYOUT

WML Job No.	Drawn	Checked	Date	Scale
10314	KPT	AW	JAN 2022	1:100 @ A1

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Drawing No.

Project	Originator	Volume	Level	Type	Role	Number	Rev
10314	WML	00	XX	DR	C	1001	T01