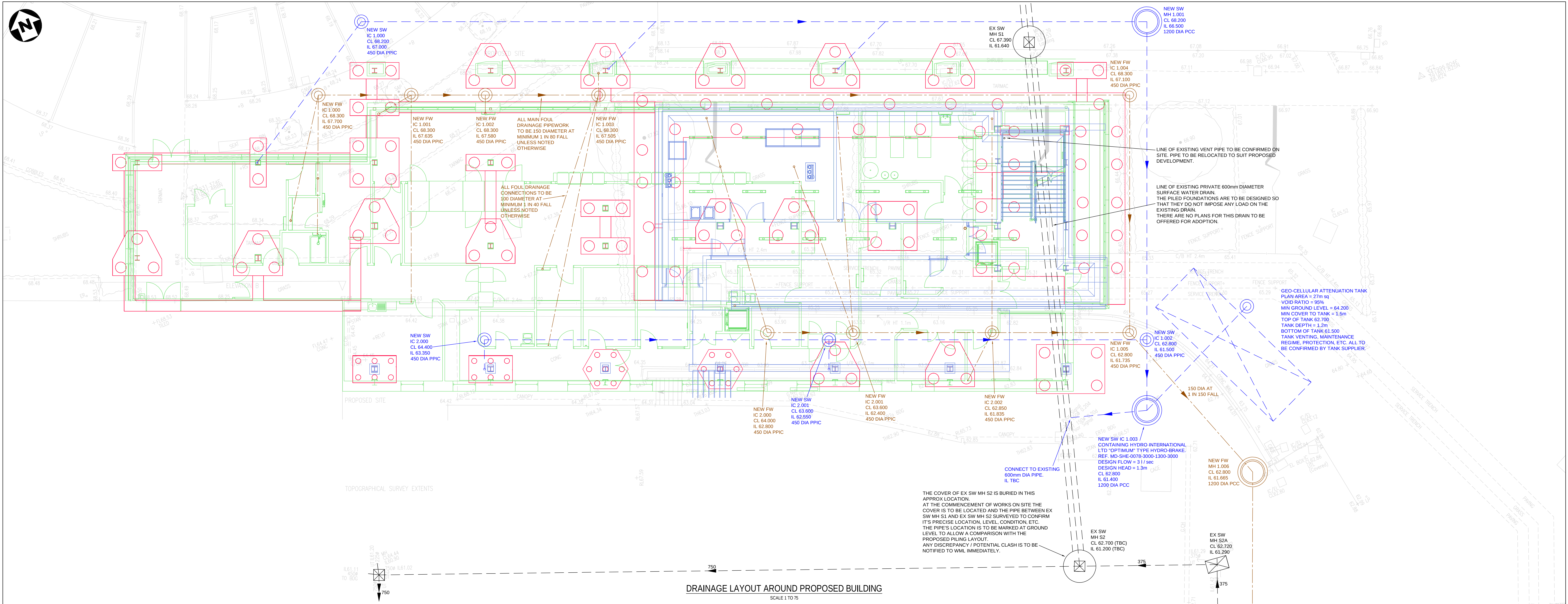




SURFACE WATER DRAINAGE STRATEGY

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:

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
AN INTRUSIVE SITE INVESTIGATION HAS BEEN COMPLETED. THIS CONFIRMED THE NEAR SURFACE GROUND CONDITIONS TO BE MADE GROUND TO 3m BELOW GROUND LEVEL, UNDERLAIN BY GLACIAL TILL. GIVEN THIS IT IS CONSIDERED THAT THE USE OF INFILTRATION / SOAKAWAYS WILL NOT BE FEASIBLE.

SURFACE WATER DISCHARGE VIA WATERCOURSE
THERE ARE NO EXISTING WATERCOURSES WITHIN OR IN THE VICINITY OF THE SITE. GIVEN THIS IT IS CONSIDERED THAT DISCHARGE TO A WATERCOURSE WILL NOT BE FEASIBLE.

SURFACE DISCHARGE VIA THE PUBLIC SEWERAGE SYSTEM
GIVEN THE ABOVE, IT WILL BE NECESSARY TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT TO THE PUBLIC DRAINAGE SYSTEM. THIS WILL BE ACHIEVED VIA A NEW CONNECTION TO THE EXISTING PRIVATE DRAINAGE SYSTEM WITHIN THE SITE.

IN LINE WITH MODERN DESIGN STANDARDS FOR SURFACE WATER DRAINAGE SYSTEMS, THE PROPOSALS 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 45% CLIMATE CHANGE ALLOWANCE.

THE SURFACE WATER DISCHARGE RATE FOR THE PROPOSED DEVELOPMENT, WHICH HAS AN AREA OF AROUND 850m², WHEN BASED ON A GREENFIELD RUN OFF RATE (Q_g) WOULD BE 0.5 l/s/sec. HOWEVER IT IS CONSIDERED THAT THIS RELATIVELY LOW ALLOWABLE DISCHARGE RATE WOULD REQUIRE A FLOW CONTROL WITH A VERY SMALL ORIFICE SIZE THAT WOULD BE PRONE TO BLOCKING. HENCE A DISCHARGE RATE OF 3 l/s/sec IS PROPOSED, THIS BEING CONSIDERED A PRACTICAL MINIMUM THAT WILL NOT BE PRONE TO BLOCKING. THIS PROPOSED DISCHARGE RATE WILL NOT BE EXCEEDED FOR ALL STORM EVENTS UP TO AND INCLUDING THE CRITICAL 1 IN 100 YEAR EVENT WITH A 45% CLIMATE CHANGE ALLOWANCE.

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 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.

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 BONIVA 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 100mm DIAMETER AT MINIMUM FALL OF 1:80 UNLESS NOTED OTHERWISE.

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

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

GENERAL NOTES CONTINUED

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.

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.

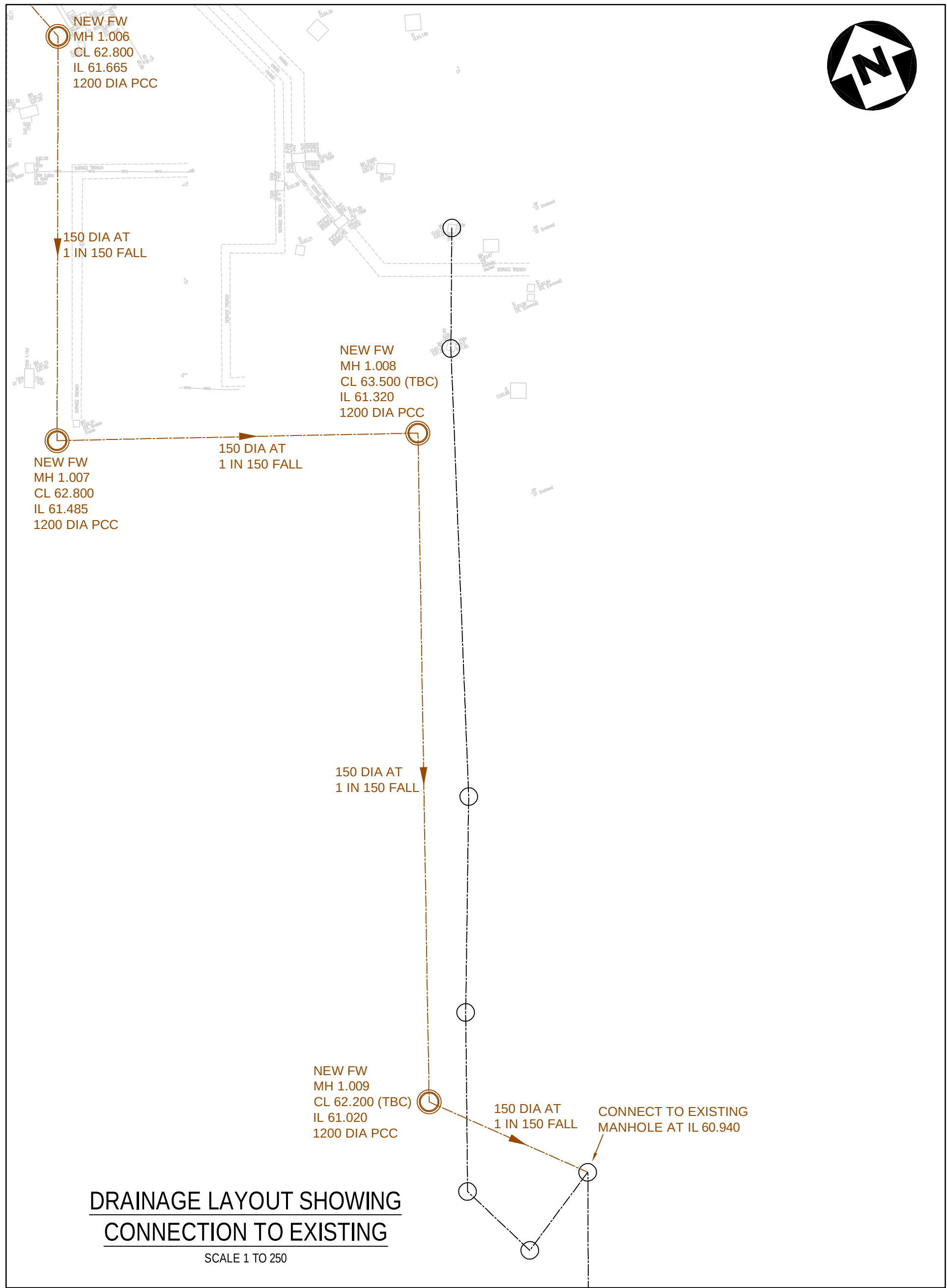
IN LINE WITH CURRENT GOOD PRACTICE:-

- 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 SITE'S MAINTENANCE TEAM WITH ADDITIONAL HELP PROVIDED BY EXTERNAL SPECIALIST DRAINAGE PROFESSIONALS BROUGHT IN AS REQUIRED.

DRAINAGE LAYOUT AROUND PROPOSED BUILDING
SCALE 1 TO 75



PRELIMINARY

P03	UPDATED TO ADDRESS UJ COMMENTS.	29.08.23	KPT	NB
P02	UPDATED TO ON SITE INVESTIGATIONS	14.02.23	RH	NB
P01	PRELIMINARY ISSUE	29.11.23	RH	NB
Rev.	Amendment	Date	By	Chkd

Project
**DECONTAMINATION DEPARTMENT
WHISTON HOSPITAL**

CLIENT
HALLIDAY MEECHAM

Title
PROPOSED DRAINAGE LAYOUT

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

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9163	WML	ZZ	XX	DR	C		1001	P03