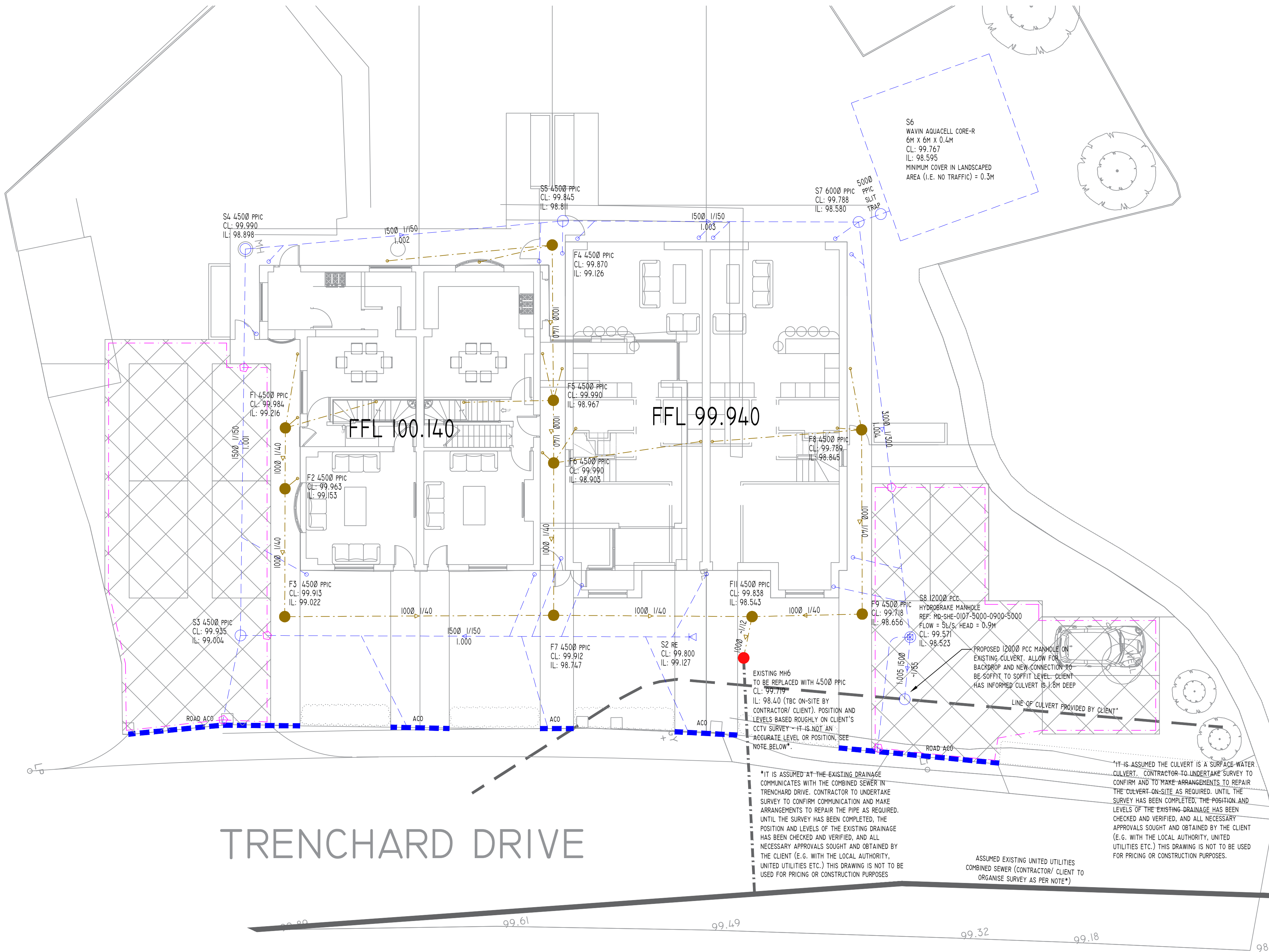




BELOW GROUND DRAINAGE LAYOUT
1:100 @ A1
1:000 @ A3

PUBLIC OR PRIVATE UTILITY NOTES

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO VERIFY LOCATION AND EXTENT OF THEIR APPARATUS AND HAVE IT MARKED OUT ON SITE PRIOR TO COMMENCING ON SITE. DETAILS AND COSTS TO BE PROVIDED BY CONTRACTOR. TRIAL HOLES SHALL BE UNDERTAKEN BY HAND TO LOCATE ANY BURIED APPARATUS IF EXCAVATION WORKS OR LEVEL REDUCTIONS ARE TO BE UNDERTAKEN IN THE GENERAL AREA.

CONTRACTORS OWN RISK ASSESSMENTS AND SAFE METHODS OF WORKING ADJACENT TO UTILITIES SHALL BE EMPLOYED AT EVERY STAGE OF THE WORK. NO RESPONSIBILITY AS TO THE ACCURACY OF THIS PLAN IS GIVEN BY BELL MUNRO CONSULTING LIMITED AND NO LIABILITY WHAT SO EVER IS ACCEPTED BY THE COMPANY FOR THE USE OF THE INFORMATION ON THIS PLAN. IT IS INTENDED FOR GENERAL REFERENCE ONLY.

CONTRACTOR SHALL UPDATE THIS PLAN UP WITH SITE INFORMATION WHEN APPARATUS CAN BE ACCURATELY LOCATED ON SITE AND RETURNED TO BELL MUNRO CONSULTING LIMITED FOR THE DRAWING TO BE UPDATED AND RE-ISSUED.

- DENOTES FOUL WATER MANHOLE
- DENOTES FOUL WATER DRAIN
- DENOTES SURFACE WATER MANHOLE
- - - DENOTES SURFACE WATER DRAIN
- 6 DENOTES GULLY (PROVIDE 1500 TAILS)
- DENOTES ACO/ SLOT DRAIN TO LANDSCAPE/ ARCHITECTS SPECIFICATION
- - - DENOTES 1000 PERFORATED PIPE LAID DIRECTLY ADJACENT TO THE KERB.
- DENOTES CONNECTION OF PERFORATED PIPE TO MAIN SURFACE WATER DRAINAGE. CONNECTION POINT NOT CRITICAL AND CAN BE ADJUSTED AT CONTRACTORS DISCRETION.
- XX DENOTES PERMEABLE PAVING (TYPE C, DRAINED) OVER TYPE 3 STONE OVER IMPERMEABLE GEOMEMBRANE, WITH LAND DRAINAGE WITHIN THE STONE LAYER DRAINING TO THE SURFACE WATER SEWERS.

ALL EXISTING & PROPOSED COVER LEVELS & INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS

ALL POSITIONS OF PROPOSED DRAINAGE & MANHOLES/RODDING EYES TO BE CONFIRMED AS ACCEPTABLE BY LANDSCAPE ARCHITECT PRIOR TO COMMENCING WORKS

ALL TEMPORARY WORKS FOR CONSTRUCTION OF DRAINAGE TO CONTRACTORS DESIGN AND DETAILS

SUDS DRAINAGE HIERARCHY
CONSIDERED AS FOLLOWS:

- INFILTRATION - SITE INVESTIGATION RECORDS SHOW THAT THE SUBSTRATA CONSISTS OF CLAY WHICH DOES NOT FACILITATE INFILTRATION, THEREFORE NOT FEASIBLE.
- TO WATERCOURSE - NOT FEASIBLE SINCE THERE ARE NO NEARBY WATERCOURSES
- TO SURFACE WATER SEWER - THE CLIENT/ CONTRACTOR HAS HAS INFORMED US THAT ALL SEWERS HAVE BEEN INVESTIGATED AND THERE ARE NO SURFACE WATER SEWERS IN THE VICINITY OF THE SITE AND THEREFORE NOT FEASIBLE.
- TO COMBINED SEWER - FEASIBLE, COMBINED SEWER IN TRENCHARD DRIVE.

SUDS FEATURES

FULL CONSIDERATION OF SUDS RESULTS IN CONCLUSION THAT THERE IS NO SPACE ON-SITE TO PROVIDE LARGE SCALE SUDS FEATURES SUCH AS PONDS OR SWALES. DOMESTIC SCALE SUDS FEATURES ARE THEREFORE PROPOSED:

- WATER BUTTS TO PROVIDE A DEGREE OF RAINWATER HARVESTING FROM ROOF WATER FROM THE DWELLING FOR IRRIGATION OF THE PRIVATE GARDEN SPACE
- PERMEABLE PAVING (TYPE C, DRAINED) TO IMPROVE WATER QUALITY ENTERING THE PERMEABLE SUB-STRATA

PASS FORWARD FLOWS INTO SEWER LIMITED TO 5L/S
THIS IS A PRACTICAL MINIMUM FLOW RESTRICTION WHETHER A LIMIT IS APPLIED TO FOR EITHER:

- 50% BETTERMENT ON BROWNFIELD RUNOFF
- GREENFIELD RUNOFF

SUBJECT TO AGREEMENT BY THE LOCAL LEAD FLOOD AUTHORITY, ENVIRONMENT AGENCY, LOCAL COUNCIL, UTILITIES COMPANY, BUILDING CONTROL AND WARRANTY PROVIDER

DEVELOPER TO SEEK FORMAL APPROVALS ONCE SCHEME IS CONFIRMED FROM ALL NECESSARY THIRD PARTIES

ALL EXISTING AND PROPOSED COVER AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS - CONTRACTOR TO CONFIRM PRIOR TO COMMENCING WORKS OR ORDERING MATERIALS TO CONFIRM SCHEME IS VIABLE AND FEASIBLE

BMC WILL ACCEPT NO RESPONSIBILITY FOR ANY DELAYS, ABORTIVE WORKS, MATERIAL COSTS ETC.

- GENERAL NOTES:
- THIS DRAWING IS COPYRIGHT AND THE PROPERTY OF BELL MUNRO CONSULTING LTD. THE DRAWING MUST NOT BE REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN AUTHORITY.
 - THIS DRAWING MUST NOT BE SCALED BY EITHER CONTRACTORS OR OTHER CONSULTANTS ANY DIMENSIONAL OR SETTING - OUT DISCREPANCIES ARE TO BE REPORTED TO BELL MUNRO CONSULTING PRIOR TO CONSTRUCTION / FABRICATION COMMENCING.
 - THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE RELEVANT BMC SPECIFICATIONS TOGETHER WITH THE APPROPRIATE ARCHITECTS AND SERVICES CONSULTANTS DRAWINGS AND SPECIFICATIONS.
 - TEMPORARY STABILITY DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE MAIN CONTRACTOR AND SHOULD BE ASSESSED ACCORDINGLY.
- DRAINAGE NOTES
- EXACT SVP AND GULLY LOCATIONS TO BE CONFIRMED FROM SERVICES ENGINEERS' /ARCHITECTS DRAWINGS AND DETAILS.
 - ALL NEW PIPEWORK TO BE WAVIN OSMADRAIN OR WAVIN ULTRARIB UPVC (OR SIMILAR APPROVED) UNLESS NOTED OTHERWISE.
 - PLASTIC PIPES (PVC-U) TO BE FLEXIBLY JOINTED AND COMPLY WITH THE REQUIREMENTS OF BS EN 1401-1 1998.
 - WHERE COVER TO PIPES IS LESS THAN 900 IN ROADS AND HARDSTANDINGS OR 400 MM ELSEWHERE, CONCRETE SURROUND IS TO BE PROVIDED IN ACCORDANCE WITH THE CLASS 2 BEDDING DETAIL.
 - ALL OTHER PIPEWORK TO BE IN CLASS S BEDDING.
 - N.B. UNTIL FINAL SERVICE IS PLACED, HEAVY TRAFFIC IS NOT TO BE ALLOWED OVER PIPE TRENCHES WITHOUT SPECIAL PRECAUTIONS.
 - PIPES AND FITTINGS ARE TO BE LAID IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - MANHOLE COVERS IN ROADS/ CAR PARKS/ DRIVEWAYS TO BE LOAD CLASS D400 TO BS EN 124.
 - MANHOLE COVERS IN LANDSCAPED AND PAVED AREAS TO BE LOAD CLASS B125 BS EN 124.
 - MANHOLE COVERS IN PAVED AREAS TO BE RECESSED TO ACCEPT PAVING FINISH.
 - ACCESS COVERS FOR GULLIES IN KERBSIDES TO BE LOAD CLASS D400 BS EN 124.
 - ALL INTERNAL POP UPS TO HAVE RODDABLE ACCESS.
 - ALL EXTERNAL RWP TO HAVE RODDABLE ACCESS.
 - PPIC MANHOLES TO BE "WAVIN RANGE" AND IF DEEPER THAN 1200MM MUST BE FITTED WITH ACCESS RESTRICTOR CAP.
 - ALL EXISTING DRAINAGE TO BE CONFIRMED PRIOR TO CONSTRUCTION COMMENCING.
 - PIPEWORK PASSING THROUGH BUILDING WALLS SHALL BE FITTED WITH ROCKER PIPES AS PER STANDARD DETAIL.
 - ANY UNLABELLED FOUL BRANCH PIPEWORK TO BE 1000 PIPEWORK AT MINIMUM 1:80 FALL.
 - ANY UNLABELLED STORM WATER BRANCH PIPEWORK TO BE 1000 AT MINIMUM 1:80 FALL.
 - ALL RWP LOCATIONS AND NUMBERS ARE TO BE CONFIRMED BY ARCHITECT PRIOR TO COMMENCING CONSTRUCTION.
 - ALL TEMPORARY WORKS FOR CONSTRUCTION OF DRAINAGE TO CONTRACTORS DESIGN AND DETAILS

PRELIMINARY ISSUE			
A	UPDATED TO SHOW LINE OF CULVERT & CONNECTION	25/05/23	98
REV	COMMENTS	DATE	91
BMC			
BELL MUNRO CONSULTING LTD			
CONSULTING CIVIL & STRUCTURAL ENGINEERS TURING HOUSE 5 ARCHWAY MANCHESTER M15 5RL TEL: 0161 2098032 FAX: 0161 2098033 EMAIL: CONSULTING@BELLMUNRO.CO.UK WWW.BELLMUNRO.CO.UK			
CUSTOMER:	MR SINGH		
PROJECT:	27/29 TRENCHARD DRIVE		
TITLE:	DRAINAGE LAYOUT		
DRAWN BY:	CHECKED BY:	SCALE:	DATE:
SJB	CM	1:100	02/23
DRAWING NUMBER:	J7310/ D01		REVISION:
			A