THE SITE WAS PREVIOUSLY TERRACED HOUSING

THE PROPOSALS ARE FOR TERRACED HOUSING

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 SEWER FROM THE CAR PARK

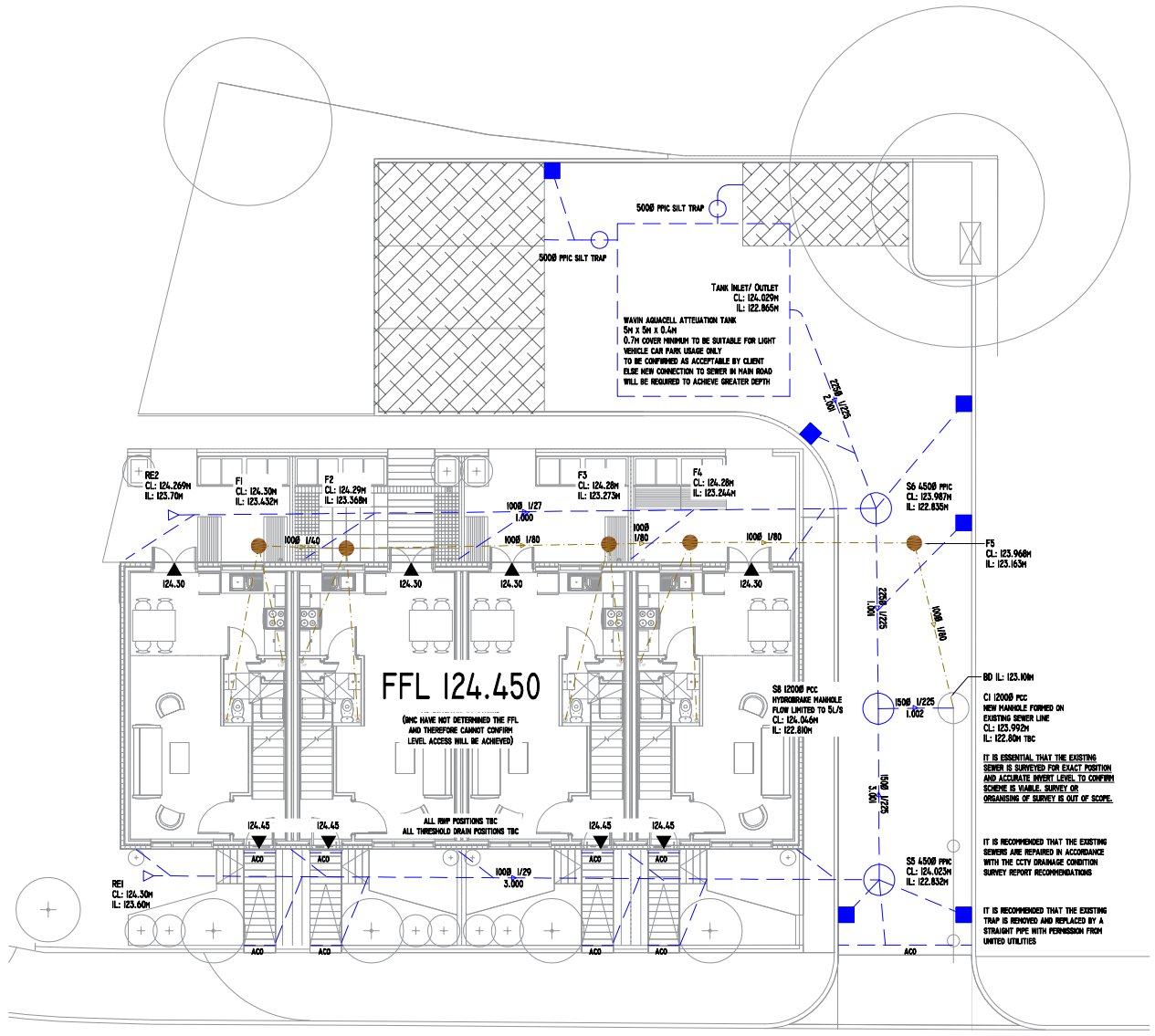
- DENOTES PERMEABLE PAVED AREAS

SUDS DRAINAGE HIERARCHY
CONSIDERED AS FOLLOWS:

1. INFILTRATION - SITE INVESTIGATION HAS IDENTIFIED DEEP MADE GROUND BELOW THE SITE. THE MADE GROUND IS CONTAMINATED REQUIRING A REMEDIATION STRATEGY TO BE IMPLEMENTED PRIOR TO OCCUPATION. SOAKAWAYS IN CONTAMINATED MADE GROUND WOULD NOT BE CONSIDERED ACCEPTABLE.
2. TO WATERCOURSE - NOT FEASIBLE SINCE NO NEARBY WATERCOURSES
3. TO SURFACE WATER SEWER - NOT FEASIBLE SINCE NO NEARBY SURFACE WATER SEWERS.
4. TO COMBINED WATER SEWER - MOST FEASIBLE SOLUTION, THEREFORE DRAIN TO THE COMBINED WATER SEWER ON-SITE.

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



DRAINAGE LAYOUT
1:100 @ A1
1:200 @ 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.

READ IN CONJUNCTION WITH PHASE 2 SITE INVESTIGATION REPORT

- DENOTES SURFACE WATER DRAIN
- DENOTES SURFACE WATER MANHOLE
- DENOTES FOUL WATER DRAIN
- DENOTES FOUL WATER
- DENOTES SURFACE WATER ROAD GULLY

PRELIMINARY
SUBJECT TO APPROVAL FROM LLFA/ UU, CONFIRMATION OF EXISTING DRAINAGE POSITION AND DEPTH, SITE LEVELS AND ABOVE GROUND DRAINAGE DROP POSITIONS

NOTES:

1. 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.
2. 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.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE RELEVANT BMC SPECIFICATIONS TOGETHER WITH THE APPROPRIATE ARCHITECTS AND SERVICES CONSULTANTS DRAWINGS AND SPECIFICATIONS.
4. MANHOLE COVERS TO BE IN ACCORDANCE WITH BS EN 124
5. CLAY PIPES TO BE FLEXIBLY JOINTED AND COMPLY WITH THE REQUIREMENTS OF BS EN 295. AS MESSRS HEPWORTH SUPERSLEEVE AND HEPSEAL
6. CONCRETE PIPES TO BE FLEXIBLY JOINTED AND COMPLY WITH THE REQUIREMENTS OF BS 5911.
7. PLASTIC PIPES (PVC-U)TO BE FLEXIBLY JOINTED AND COMPLY WITH THE REQUIREMENTS OF BS EN 1401-1 1998.
8. WHERE COVER TO PIPES IS LESS THAN 1200 IN ROADS AND HARDSTANDINGS OR 900 MM ELSEWHERE, CONCRETE SURROUND IS TO BE PROVIDED IN ACCORDANCE WITH THE DETAIL.

N.I. UNTIL FINAL SERVICE IS PLACED, HEAVY TRAFFIC IS NOT TO BE ALLOWED OVER PIPE TRENCHES WITHOUT SPECIAL PRECAUTIONS.

9. PIPES AND FITTINGS ARE TO BE LAID IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
10. MANHOLE COVERS IN HIGHWAYS AND CAR PARKS TO BE LOAD CLASS D400 TO BS EN 124.
11. MANHOLE COVERS IN LANDSCAPED AND PAVED AREAS TO BE LOAD CLASS B125 BS EN 124.
12. MANHOLE COVERS IN PAVED AREAS TO BE RECESSED TO ACCEPT PAVING FINISH.
13. ACCESS COVERS FOR GULLIES IN KERBSIDES TO BE LOAD CLASS C250 BS EN 124.
14. ALL INTERNAL POP UPS TO HAVE RODDABLE ACCESS
15. CONTRACTOR TO ALLOW FOR NAYLOR R6'S WHERE PIPES PASS THOROUGH SUB FLOOR WALLS
16. ALL MANHOLES & PPICS IN HARD STANDINGS TO HAVE 150MM CONCRETE SURROUND

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 TO CONFIRM SCHEME IS VIABLE AND FEASIBLE

REV	COMMENTS	DATE	BY

BMC

BELL MUNRO CONSULTING LTD

CONSULTING CIVIL & STRUCTURAL ENGINEERS
TURING HOUSE
5 ARCHWAY
MANCHESTER
M15 5RL
TEL: 0161 209 8032
FAX: 0161 209 8033
EMAIL: CONSULTING@BELLMUNRO.CO.UK
WWW.BELLMUNRO.CO.UK

CLIENT: STEP PLACES

PROJECT: ENTWISTLE ROAD, ROCHDALE

TITLE: DRAINAGE LAYOUT

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
SJB	CM	1:100	07/21

SKETCH NUMBER: J7400/ EX01

REVISION: A