

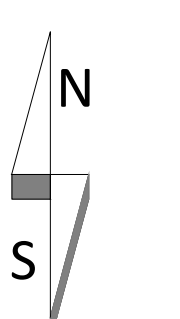
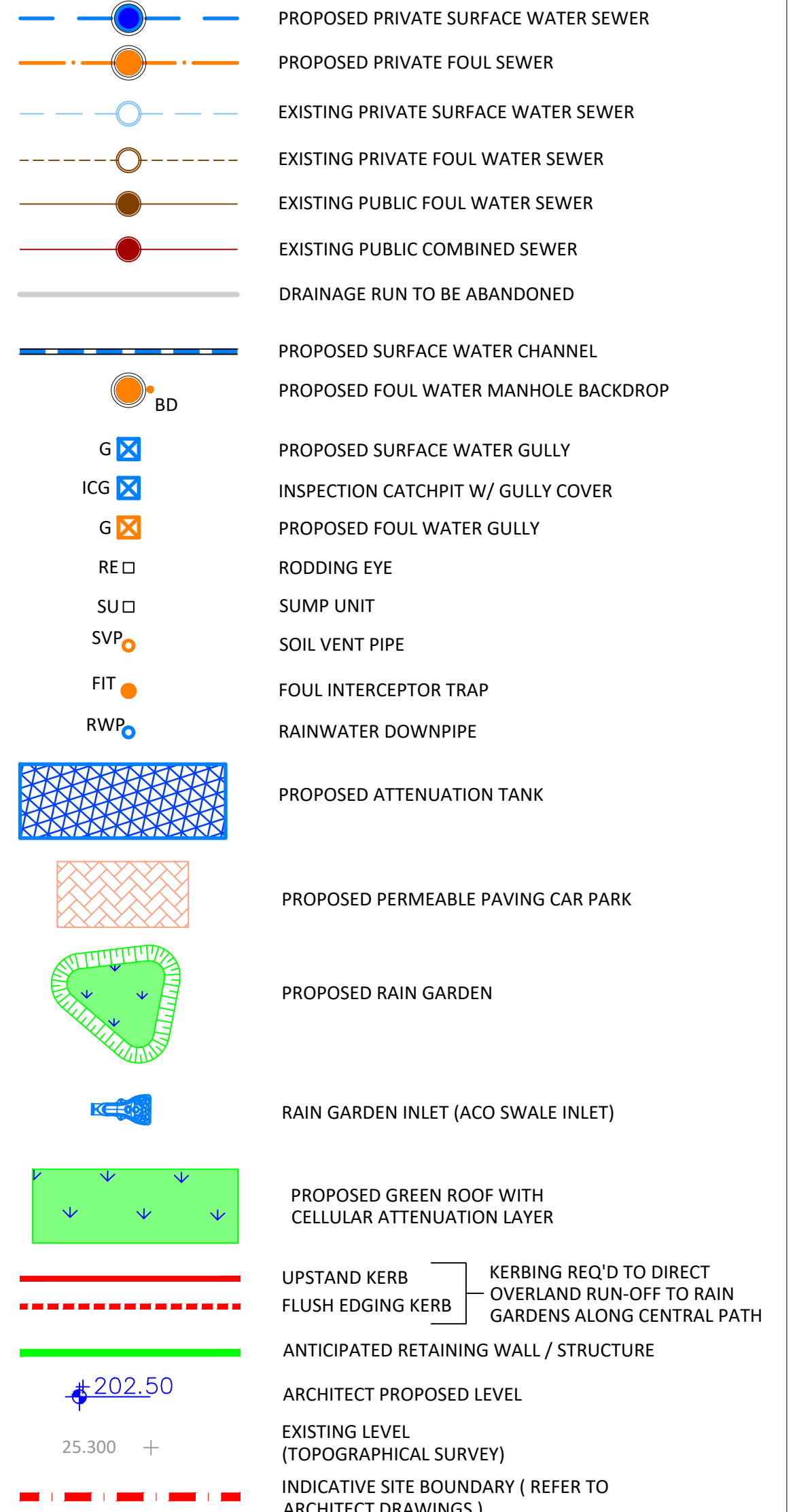
DRAINAGE NOTES.

- 1. ALL PRECAST CONCRETE UNITS ARE TO BE TO BS 5911 (CLASS 3 SULPHATE RESISTANT CEMENT).
2. ALL PROPOSED MANHOLE COVERS AND FRAMES ARE TO BE DUCTILE IRON COMPLYING WITH BS EN 124.
3. ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH PART H OF THE BUILDING REGULATIONS AND BS EN 752.
4. ALL MANHOLE COVER LEVELS ARE APPROXIMATE AND TO BE ADJUSTED TO SUIT THE ARCHITECT'S PROPOSED LEVELS.
5. THE CONTRACTOR IS TO ALLOW FOR ALL ABANDONED DRAINAGE RUNS TO BE REMOVED OR GROUTED UP AS NECESSARY.
6. THE CONTRACTOR IS TO ALLOW FOR JET WASHING OF ALL LENGTHS OF EXISTING SEWERS WHICH ARE TO BE RETAINED.
7. THE CONTRACTOR IS TO ALLOW FOR JET WASHING OF THE ENTIRE DRAINAGE SYSTEM ON COMPLETION OF WORKS.
8. THE CONTRACTOR MUST CHECK THE LEVELS AND CONDITION OF ALL EXISTING DRAINAGE OUTFALLS PRIOR TO CONSTRUCTION OF ANY DRAINAGE, UNLESS OTHERWISE AGREED. TO ENSURE THE PROPOSED DESIGN MAY BE ACHIEVED, ANY DISCREPANCIES MUST BE REPORTED TO SIMPLE WORKS IMMEDIATELY.
9. ALL RWP, SVP AND FOUL DRAINAGE POSITIONS, INCLUDING UNDERSLAB GULLIES, ARE TO BE CONFIRMED BY THE ARCHITECT.
10. WHERE RWP'S STUB STACKS AND SVP'S ARE CONNECTED DIRECT TO THE DRAIN, RODDING ACCESS PLATES ARE TO BE PROVIDED.
11. ALL FOUL WATER DRAINS ARE TO BE 100Ø @ 1:40 U.N.O.
12. ALL SURFACE WATER DRAINS ARE TO BE 100Ø @ 1:60 U.N.O.

DESIGN NOTES

- 1. THE BELOW GROUND SURFACE WATER SYSTEM HAS BEEN DESIGNED TO THE FOLLOWING CONDITIONS:
1 YEAR - PIPE FULL
30 YEAR - SURCHARGING ALLOWED WITH NO FLOODING.
100 YEAR + 40% C/E - SURCHARGING ALLOWED WITH NO FLOODING
2. THIS DRAWING IS BASED ON ARCHITECT DRAWING REF CEF-00-00-00-M2-A-100, CEF-00-00-00-M2-A-101, AND TOPOGRAPHICAL SURVEY REF S22044-001-0.
3. FOUL CONNECTION TO THE PUBLIC SEWER ARE SUBJECT TO FORMAL S106 APPLICATIONS WITH WELSH WATER. NO WORK ON THE PUBLIC SEWER IS TO TAKE PLACE WITHOUT PRIOR PERMISSION.
4. SURFACE WATER DRAINAGE TO DISCHARGE VIA EXISTING OUTFALL AT MAXIMUM 8L/S IN ALL EVENTS UP TO AND INCLUDING THE 1:100YR + 40% C/E ALLOWANCE RETURN PERIOD EVENT. EXISTING OUTFALL PIPE DISCHARGE LOCATION UNKNOWN. FURTHER INVESTIGATION REQUIRED. POSSIBLY DISCHARGES TO TAF FAWR WATERCOURSE SOUTH OF SITE.
5. THE DRAINAGE DESIGN IS SUBJECT TO APPROVAL WITH THE LPA, SAB AND THE SUBSEQUENT DISCHARGE OF RELEVANT PLANNING CONDITIONS AND SAB APPROVAL, AND IS THEREFORE SUBJECT TO CHANGE TO SUIT STATUTORY VETTING COMMENTS.
6. FULL DETAILS OF THE GREEN ROOFS ARE TO BE CONFIRMED BY SPECIALIST DESIGNER. PROPOSED DISCHARGE FROM EACH ROOF = 1L/S.
7. CASCADING RAIN GARDENS SERVING CENTRAL CORRIDOR TO HAVE PERFORATED UNDER-DRAINAGE. CATCHPIT GULLIES LOCATED ON OUTLETS AT RAIN GARDEN LOW-POINTS TO DRAIN PONDING RUN-OFF IN RARE STORM EVENTS. LINK PIPES WITH ACO 'SWALE INLETS' TO INTER-CONNECT RAIN GARDENS DUE TO POOR GROUND CONDITIONS (MADE GROUND) UNSUITABLE FOR SOAKAGE. DUE TO LAND GRADIENTS AND POTENTIAL VELOCITY OF RUN-OFF, CHANNEL TO BE FORMED WITH GRAVEL BED TO PREVENT PLANT WASHOUT/EROSION.
8. DUE TO TOPOGRAPHY AND FINISHED FLOOR LEVELS, 14no APARTMENTS OF EAST BLOCK WILL REQUIRE A FOUL PUMP STATION. FLOW RATES TO BE CONFIRMED, BASED ON 9x2P AND 5x3P APARTMENTS, 4950L 24HR EMERGENCY STORAGE REQUIRED (150L PER HEAD), PUMP SPECIFICATION TBC BY PUMP SPECIALIST.
9. PERMEABLE PAVING TO BOTTOM CAR PARK TO BE TYPE B SYSTEM (PARTIAL INFILTRATION) WITH 600mm DEEP STORAGE SUB-BASE PROVIDING SURFACE WATER ATTENUATION.
10. DEVELOPER-OWNED ACCESS ROAD IS TO BE GRADED TOWARDS PERMEABLE PAVEMENT CAR PARK FOR CATCHMENT / TREATMENT OF RUN-OFF.

LEGEND



CDM EXISTING SERVICES EXISTING SERVICES ARE TO BE LOCATED PRIOR TO DRAINAGE EXCAVATION WORKS.

DESIGN PERMEABLE PAVING UNLESS NOTED OTHERWISE: DUE TO DEEP MADE-GROUND, PERMEABLE PAVING IS TO BE TYPE C (NO INFILTRATION) SYSTEMS WITH APPROX. 300mm POROUS SUB-BASE STORAGE WITH PERFORATED UNDER-DRAIN AND POSITIVE OUTLET INTO DRAINAGE NETWORK. OUTLET TO HAVE 'CONTROFLOW 500' WEIR CHAMBER TO CONTROL FLOWS.

DESIGN CASCADING RAIN GARDENS / BIO RETENTION AREAS RAIN GARDENS SERVING CENTRAL CORRIDOR TO HAVE PERFORATED UNDER-DRAINAGE. CATCHPIT GULLIES LOCATED ON OUTLETS AT RAIN GARDEN LOW-POINTS TO DRAIN PONDING RUN-OFF IN RARE STORM EVENTS. LINK PIPES WITH ACO 'SWALE INLETS' TO INTER-CONNECT RAIN GARDENS DUE TO POOR GROUND CONDITIONS (MADE GROUND) UNSUITABLE FOR SOAKAGE. DUE TO LAND GRADIENTS AND POTENTIAL VELOCITY OF RUN-OFF, CHANNEL TO BE FORMED WITH GRAVEL BED TO PREVENT PLANT WASHOUT/EROSION.

DESIGN EAST BLOCK GREEN ROOF TOP LEVEL ROOF (APPROX 230m3) TO CONSIST OF GREEN ROOF WITH CELLULAR STORAGE, RESTRICTED TO 1L/S DISCHARGE INTO BELOW-GROUND DRAINAGE. TO SPECIALIST ROOF DESIGN DETAILS.

DESIGN WEST BLOCK GREEN ROOF TOP LEVEL ROOF (APPROX 260m3) TO CONSIST OF GREEN ROOF WITH CELLULAR STORAGE, RESTRICTED TO 1L/S DISCHARGE INTO BELOW-GROUND DRAINAGE. TO SPECIALIST ROOF DESIGN DETAILS.

CDM DESIGN FOUL DISCHARGE CONNECTION ON EXISTING FOUL DRAIN IS SUBJECT TO FURTHER SURVEYS AND S106 APPROVAL/ PERMISSION WITH WELSH WATER.

DESIGN CUT-OFF DRAINAGE CHANNEL NEW CUT-OFF CHANNEL TO PREVENT RUN-OFF FROM PUBLIC HIGHWAY INTO CONTROLLED ON-SITE DRAINAGE NETWORK

CDM DESIGN FPS-01 DUE TO TOPOGRAPHY AND FFL'S, 14no APARTMENTS OF EAST BLOCK WILL REQUIRE A PUMP STATION. FLOW RATES TO BE CONFIRMED. BASED ON 9x2P AND 5x3P APARTMENTS, 4950L 24HR EMERGENCY STORAGE REQUIRED (150L PER HEAD). PUMP SPECIFICATION TBC BY PUMP SPECIALIST.

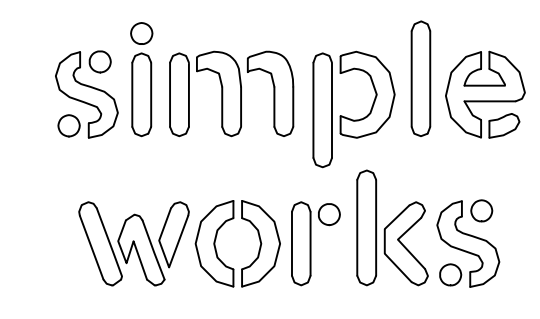
DESIGN ACCESS ROAD DRAINAGE DEVELOPER-OWNED ACCESS ROAD IS TO BE GRADED TOWARDS PERMEABLE PAVEMENT FOR CATCHMENT / TREATMENT OF RUN-OFF. PAVING TO HAVE INCREASED SUB-BASE DEPTH TO ACCOMMODATE. EXISTING ROAD GULLIES ARE TO BE REMOVED.

DESIGN PERMEABLE PAVED CAR PARK PERMEABLE PAVING TO BOTTOM CAR PARK TO BE TYPE B SYSTEM (PARTIAL INFILTRATION) WITH 600mm DEEP STORAGE SUB-BASE PROVIDING SURFACE WATER ATTENUATION.

CDM EXISTING SERVICES EXISTING SERVICES ARE TO BE LOCATED PRIOR TO DRAINAGE EXCAVATION WORKS.

DESIGN SURFACE WATER DISCHARGE SURFACE WATER DRAINAGE TO DISCHARGE VIA EXISTING OUTFALL AT MAXIMUM 8L/S IN ALL EVENTS UP TO AND INCLUDING THE 1:100YR + 40% C/E ALLOWANCE RETURN PERIOD EVENT.

DESIGN EXISTING SURFACE WATER OUTFALL PIPE EXISTING OUTFALL PIPE DISCHARGE LOCATION UNKNOWN. FURTHER INVESTIGATION REQUIRED. PIPE DISCHARGES APPROX 20m SOUTH OF SITE TO LAND, POSSIBLE WATERCOURSE OR TAF FAWR RIVER EMBANKMENT.



NOTES:

- 1. NO DIMENSIONS TO BE SCALED FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS TOGETHER WITH THE RELEVANT SPECIFICATION AND GENERAL NOTES.
3. ANY NON STRUCTURAL ITEMS SUCH AS WATERPROOFING, CLADDING, FINISHES, FIRE STOPPING ARE TO BE THE ARCHITECT'S SPECIFICATIONS.
4. ALL PROPRIETARY PRODUCTS ARE TO BE USED AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS DETAILS AND REQUIREMENTS.
5. THE STRUCTURE IS DESIGNED AND DETAILED FOR THE PERMANENT CONDITION ONLY THE CONTRACTOR IS RESPONSIBLE FOR THE STRUCTURE CONDITION DURING ITS TEMPORARY CONDITION. ANY TEMPORARY WORKS REQUIRED DURING CONSTRUCTION AND ANY TEMPORARY LOADS ONTO THE EXISTING AND NEW STRUCTURE WHICH SHALL BE LESS THAN THOSE FOR WHICH IT HAS BEEN CONFIRMED OR DESIGNED RESPECTIVELY.
6. ALL WORKS UNDERTAKEN BY CONTRACTOR TO BE COMPLIANT WITH RELEVANT AND CURRENT BUILDING CODES, REGULATIONS AND GOOD PRACTICES.

NOT FOR CONSTRUCTION

Project information including client name (MERTHYR VALLEYS HOMES LTD), project name (PROPOSED DRAINAGE GENERAL ARRANGEMENT), and stage (STAGE 3).