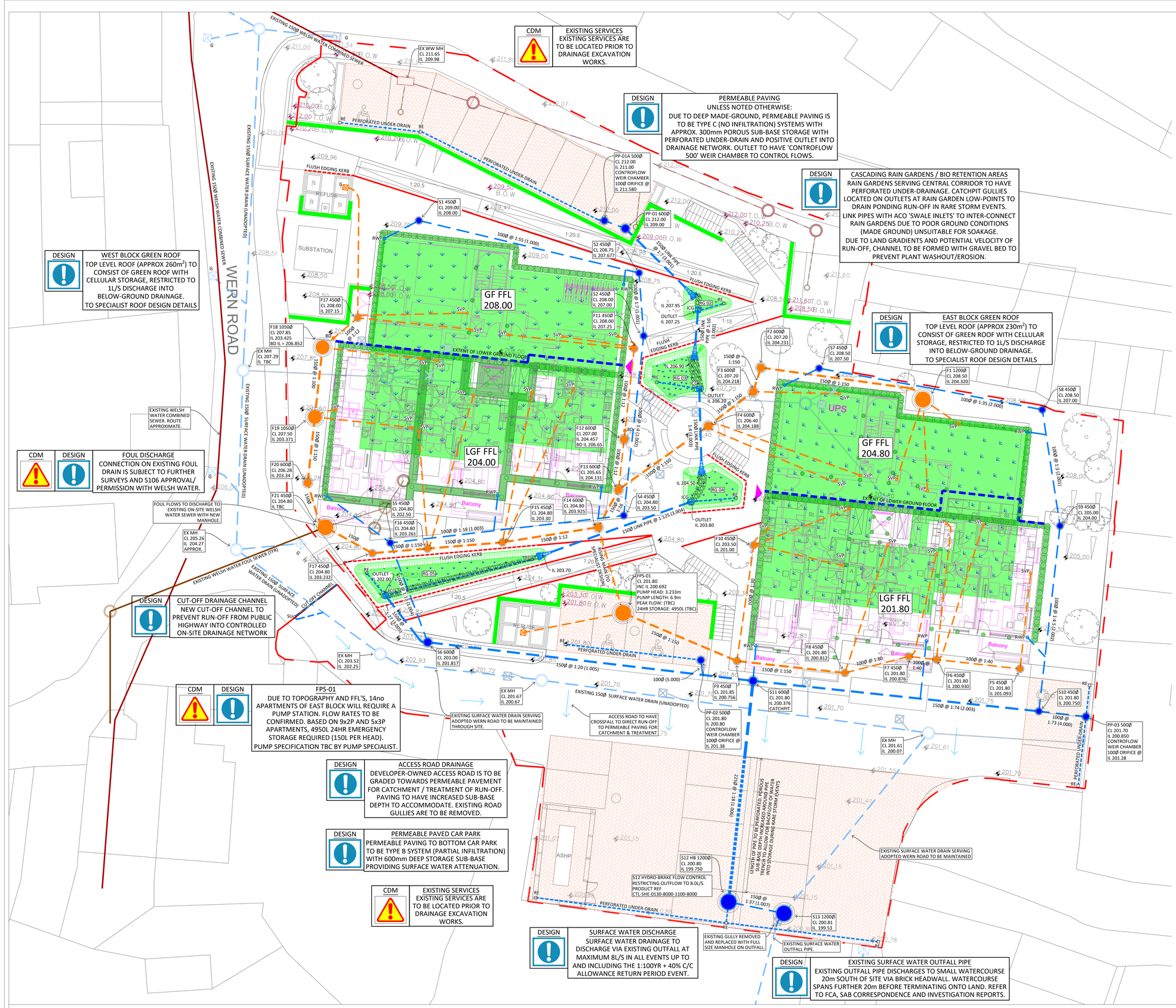
CDM
EXISTING SERVICES
EXISTING SERVICES ARE TO BE LOCATED PRIOR TO DRAINAGE EXCAVATION WORKS.
DESIGN
PERMEABLE PAVING
UNLESS NOTED OTHERWISE:
DUE TO DEEP MADE-GROUND, PERMEABLE PAVING IS TO BE TYPE C (NO INFILTRATION) SYSTEMS WITH APPROX. 300mm POROUS SUB-BASE STORAGE WITH PERFORATED UNDER-DRAIN AND 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
WEST BLOCK GREEN ROOF
TOP LEVEL ROOF (APPROX 260m²) TO CONSIST OF GREEN ROOF WITH CELLULAR STORAGE, RESTRICTED TO 1L/S DISCHARGE INTO BELOW-GROUND DRAINAGE.
TO SPECIALIST ROOF DESIGN DETAILS
DESIGN
EAST BLOCK GREEN ROOF
TOP LEVEL ROOF (APPROX 230m²) 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/C ALLOWANCE RETURN PERIOD EVENT.
DESIGN
EXISTING SURFACE WATER OUTFALL PIPE
EXISTING OUTFALL PIPE DISCHARGES TO SMALL WATERCOURSE 20m SOUTH OF SITE VIA BRICK HEADWALL. WATERCOURSE SPANS FURTHER 20m BEFORE TERMINATING ONTO LAND. REFER TO FCA, SAB CORRESPONDENCE AND INVESTIGATION REPORTS.
WERN ROAD
EXISTING 150Ø WELSH WATER COMBINED SEWER
EXISTING 150Ø SURFACE WATER DRAIN (UNADOPTED)
EXISTING 150Ø WELSH WATER COMBINED SEWER
EXISTING WELSH WATER FOUL SEWER (TYP.)
EXISTING 150Ø SURFACE WATER DRAIN (UNADOPTED)
EXISTING WELSH WATER COMBINED SEWER. ROUTE APPROXIMATE.
FOUL FLOWS TO DISCHARGE TO EXISTING ON-SITE WELSH WATER SEWER WITH NEW MANHOLE.
EX WW MH CL 211.65 IL 209.98
EX MH CL 207.29 IL TBC
EX MH CL 205.26 IL 204.27 APPROX.
EX MH CL 203.52 IL 202.25
EX MH CL 201.67 IL 200.67
PERFORATED UNDER-DRAIN
FLUSH EDGING KERB
UPSTAND KERB
SUBSTATION
REFUSE
CUT-OFF CHANNEL
GF FFL 208.00
LGF FFL 204.00
GF FFL 204.80
LGF FFL 201.80
EXTENT OF LOWER GROUND FLOOR
UPS
Balcony
ASHP
OUTLET IL 207.25
OUTLET IL 206.20
OUTLET IL 203.80
OUTLET IL 202.00
S1 450Ø CL 209.00 IL 208.00
S2 450Ø CL 208.75 IL 207.677
S2 450Ø CL 208.00 IL 207.00
S3 450Ø CL 208.00 IL 207.00
S4 450Ø CL 204.80 IL 203.50
S5 450Ø CL 204.80 IL 202.50
S6 600Ø CL 203.00 IL 201.817
S7 450Ø CL 208.50 IL 207.50
S8 450Ø CL 208.50 IL 207.00
S9 450Ø CL 205.00 IL 204.00
S10 450Ø CL 201.80 IL 200.750
S11 600Ø CL 201.80 IL 200.376 CATCHPIT
S12 HB 1200Ø CL 200.80 IL 199.750
S13 1200Ø CL 200.81 IL 199.53
F1 1200Ø CL 208.50 IL 204.320
F2 600Ø CL 207.20 IL 204.231
F3 600Ø CL 207.20 IL 204.218
F4 600Ø CL 206.40 IL 204.188
F5 450Ø CL 201.80 IL 201.093
F6 450Ø CL 201.80 IL 200.930
F7 450Ø CL 201.80 IL 200.876
F8 450Ø CL 201.80 IL 200.812
F9 450Ø CL 201.85 IL 200.756
F10 450Ø CL 203.50 IL 201.00
F11 450Ø CL 208.00 IL 207.25
F12 600Ø CL 207.00 IL 204.457 BD IL 206.65
F13 600Ø CL 205.65 IL 204.131
F14 600Ø CL 204.80 IL 203.925
F15 450Ø CL 204.80 IL 203.30
F16 450Ø CL 204.80 IL 203.261
F17 450Ø CL 208.00 IL 207.15
F17 450Ø CL 204.80 IL 203.232
F18 1050Ø CL 207.85 IL 203.425 BD IL = 206.852
F19 1050Ø CL 207.50 IL 203.371
F20 600Ø CL 206.28 IL 203.34
F21 450Ø CL 204.80 IL TBC
PP-01A 500Ø CL 212.00 IL 211.00 CONTROFLOW WEIR CHAMBER 100Ø ORIFICE @ IL 211.580
PP-01 600Ø CL 212.00 IL 209.00
PP-02 500Ø CL 201.80 IL 200.80 CONTROFLOW WEIR CHAMBER 100Ø ORIFICE @ IL 201.38
PP-03 500Ø CL 201.70 IL 200.850 CONTROFLOW WEIR CHAMBER 100Ø ORIFICE @ IL 201.28
FPS-01 CL 201.80 INC IL 200.692 PUMP HEAD: 3.233m PUMP LENGTH: 6.9m PEAK FLOW: (TBC) 24HR STORAGE: 4950L (TBC)
S12 HYDRO-BRAKE FLOW CONTROL RESTRICTING OUTFLOW TO 8.0L/S. PRODUCT REF CTL-SHE-0130-8000-1100-8000
EXISTING SURFACE WATER DRAIN SERVING ADOPTED WERN ROAD TO BE MAINTAINED
EXISTING SURFACE WATER DRAIN SERVING ADOPTED WERN ROAD TO BE MAINTAINED THROUGH SITE.
ACCESS ROAD TO HAVE CROSSFALL TO DIRECT RUN-OFF TO PERMEABLE PAVING FOR CATCHMENT & TREATMENT
EXISTING GULLY REMOVED AND REPLACED WITH FULL SIZE MANHOLE ON OUTFALL.
EXISTING SURFACE WATER OUTFALL PIPE.
LENGTH OF PIPE TO BE PERFORATED. PROVIDE SUB-BASE DEPTH INCREASED AROUND PIPE TRENCH TO ALLOW FOR 30% VOID RATIO OF WATER INTO STORAGE DURING RARE STORM EVENTS
2250 @ 1:81 (1.005)
PERFORATED UNDER-DRAIN
RWP
SVP
RG 01
RG 02
RG 03
RG 04
RG 05
ICG
RE
BD
1:20.5
1:15
1:40
1:50
1:20
1:12
1:17
1:18
1:27
1:37
1:73
1:74
1:81
1:100
1:125
1:150
1:200
1:1000
100Ø @ 1:55 (1.000)
100Ø @ 1:17 (1.001)
100Ø @ 1:17 (1.001)
100Ø @ 1:18 (1.003)
100Ø @ 1:35 (2.000)
100Ø @ 1:13 (2.000)
100Ø @ 1:80
100Ø @ 1:40
100Ø @ 1:4 (5.000)
100Ø @ 1:73 (4.000)
150Ø @ 1:150
150Ø @ 1:1000
150Ø @ 1:12
150Ø @ 1:20 (1.005)
150Ø @ 1:37 (1.007)
150Ø LINK PIPE @ 1:125 (3.004)
150Ø LINK PIPE @ 1:100 (3.002)
150Ø LINK PIPE @ 1:40 (3.003)
150Ø LINK PIPE @ 1:73 (3.002)
150Ø @ 1:74 (2.003)
150Ø @ 1:27 (5.001)
150Ø @ 1:27 (5.001)
150Ø @ 1:4 (5.000)
150Ø @ 1:4 (5.000)
150Ø @ 1:4 (5.000