

ENGINEERING & PHASE 2 KEY

- FFL 42.00 — PROPOSED FINISHED FLOOR LEVEL
- 900RW — RETAINING WALL (HEIGHT SHOWN IS REQUIRED RETAINING HEIGHT AND DOES NOT INCLUDE HEIGHT OF BOUNDARY WALLS OR FENCES)
- LANDSCAPED BATTER MAXIMUM 1:2
- 900TANK — TANKED WALL
- 600UB — UNDERBUILD (ADDITIONAL BELOW DPC LEVEL)
- STEPPED ACCESS (PART M)
- 35.90 — SPOT LEVEL
- 40.100 / 40.000 / 39.900 — PROPOSED CONTOURS
- 300GB — GRAVEL BOARD
- SURFACE WATER MANHOLE & SEWER (SAB ADOPTABLE)
- SURFACE WATER CHAMBER & LATERAL TO BE 150mmø UNLESS STATED OTHERWISE (SAB ADOPTABLE)
- SURFACE WATER CHAMBER & LATERAL TO BE 150mmø (PRIVATE)
- RODDING EYE (PRIVATE) INVERT LEVEL TO BE MINIMUM 450mm BELOW GROUND LEVEL
- FOUL WATER MANHOLE & SEWER (DCWW ADOPTABLE)
- FOUL WATER CHAMBER & LATERAL TO BE 100mmø UNLESS STATED OTHERWISE (DCWW ADOPTABLE)
- FOUL WATER CHAMBER & LATERAL TO BE 100mmø (PRIVATE)
- ALL ADOPTABLE MANHOLES IN THE HIGHWAY TO HAVE D400 COVERS. ALL CHAMBERS IN SHARED DRIVES TO BE MINIMUM C250 COVER ALL CHAMBERS IN PRIVATE DRIVES TO HAVE MINIMUM B125 COVERS.
- ALL CHAMBERS USED TO LATERAL DRAINS ARE TO BE EITHER TYPE 3 OR 4.
- HIGHWAY ADOPTABLE ROAD GULLY
- STONE GRIP – 150mm TO REAR GARDENS AROUND PATIOS
- STONE GRIP – 225mm TO HIGH SIDE OF RETAINING WALL (OR LOW SIDE WHERE SHOWN)
- LINEAR DRAINAGE CHANNEL
- ADOPTABLE STREET LIGHTING
- TANKED BIO-RETENTION AREA WITH PROPOSED OVERFLOW GULLY
- ALTHON PRECAST HEADWALL
- DU — SEL ENVIRONMENTAL 'DIFFUSER UNIT'
- ADOPTABLE RAIN GARDEN OVER FLOW GULLY
- WBI — ADOPTABLE WATER BREAK INLET
- PERMEABLE PAVING (SAB ADOPTABLE)
- PRIVATE PERMEABLE PAVING
- FIN DRAIN WITHIN PERMEABLE SUB-BASE (TCS FILDAIN TYPE 5)
- PRIVATE RAIN GARDEN
- 110mm POWERSLOT-HS FULL-DRAIN PIPE SYSTEM WITH 5mm SLOTS WITHIN PERMEABLE PAVING
- PRIVATE DELINEATION KERB
- GC — RAIN GARDEN 'GULLY CHUTE' (GC)
- RAIN WATER PIPE – TO DISCHARGE AT SURFACE LEVEL OR INTO PRIVATE DRAINAGE CHANNEL
- HYDRO INTERNATIONAL DOWNSTREAM DEFENDER
- NON PERMEABLE BLOCK PAVING

PHASE 1 DRAINAGE KEY

- SAB IL: 36.80 — PROPOSED ADOPTABLE SURFACE SEWER - Subject to SAB Approval
- FA6 IL: 37.64 — PROPOSED ADOPTABLE FOUL SEWER - Subject to S104 Approval
- RG — NEWPORT CITY COUNCIL HIGHWAY ADOPTABLE ROAD GULLY
- DISTRIBUTOR CELL SERVING TANKED PERMEABLE SURFACING
- TANKED BIO-RETENTION AREA - See construction details
- TANKED PERMEABLE PAVING - See construction details
- MACRO PERVIOUS DRIVE - See construction details
- TYPICAL STEEPER GRADIENT SWALES WITH CHECK DAMS
- ACTIVE STORAGE SWALE
- SWALE MAINTENANCE STRIP - 0.3m wide, providing a level bund to the top of the swales to protect against erosion where levels will not allow greater width
- CELLULAR (PLASTIC) SURFACE WATER ATTENUATION TANK
- HW6 — ALTHON CONCRETE HEADWALL - SEE SCHEDULE FOR DETAILS
- OUTLET HEADWALL - SEE SCHEDULE FOR DETAILS From domestic properties
- FILTER STRIP DRAINAGE SERVING SHARED DRIVES - SEE CONSTRUCTION DETAILS - DEEPER CONSTRUCTION AREA SHOWN BY RED OUTLINE
- PERMEABLE PAVING OVERFLOW YARD GULLY
- PRIVATE PERMAVOID CELL WITHIN PRIVATE DRIVEWAYS
- LDC — LINEAR DRAINAGE CHANNEL (150mm WIDE AT THRESHOLD OF GARAGE)
- CHANNEL DRAIN

GENERAL NOTES

1. DO NOT SCALE FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR IS TO CHECK AND VERIFY ALL BUILDINGS AND SITE DIMENSIONS AND LEVELS, INCLUDING SEWER INVERT LEVELS, BEFORE WORKS START ON SITE. THE CONTRACTOR IS TO COMPLY IN ALL ASPECTS WITH THE CURRENT BUILDING LEGISLATION, BRITISH STANDARDS ETC.
3. POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING WORK.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AND CHECKED AGAINST ALL OTHER DRAWINGS ENGINEERING DETAILS, SPECIFICATIONS AND ANY STRUCTURAL, GEOTECHNICAL OR OTHER SPECIALIST DOCUMENT PROVIDED. ANY ANOMALY OR CONTRADICTION BETWEEN ANY OF THE ABOVE IS TO BE REPORTED TO THE DEVELOPERS ENGINEER.
5. ALL LEVELS ARE IN TERMS OF THE OS DATUM.

DRAINAGE NOTES

1. ALL PRIVATE DRAINAGE SHALL BE IN ACCORDANCE WITH BS8301 AND RELEVANT SECTIONS OF APPROVED DOCUMENT H OF THE BUILDING REGULATIONS.
2. THE CONTRACTOR IS TO CHECK THE LEVEL OF EXISTING SEWERS BEING USED AS OUTFALLS OR CROSSING PROPOSED DRAINAGE RUNS PRIOR TO LAYING ANY PIPES. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER.
3. PRIVATE HOUSE DRAINAGE WILL BE FLEXIBLY JOINTED PLASTIC OR CLAY PIPEWORK. DIAMETER 100mm UNLESS SHOWN OTHERWISE.
4. ALL CONNECTIONS FOR HOUSE DRAINAGE SHALL BE 100mm UNLESS NOTED OTHERWISE AND MUST EXTEND 500mm BEHIND THE BACK OF FOOTWAY/HOMEZONE ROAD. ALL CONNECTIONS WHEN LAID SHALL BE PLUGGED, PROTECTED AS NECESSARY AND MARKED WITH A STAKE FOR FUTURE USE. ALL FW DRAINAGE LATERALS FROM THE ADOPTABLE DRAINAGE SYSTEM TO BE 100mm.
5. FOR PRIVATE DRAINS WHERE COVER TO PIPES IS LESS THAN 900mm IN VEHICULAR AREAS OR 600mm IN OTHER AREAS PROTECTION IN THE FORM OF A 100mm THICK CONCRETE SURROUND.
6. WHERE PIPES PASS THROUGH SCREEN WALLS, FOOTINGS OR RETAINING WALLS LINTELS ARE TO BE PROVIDED OVER. UNDER BUILDINGS PIPES SHALL BE SURROUNDED WITH 150mm THICKNESS OF GRANULAR MATERIAL. WHERE DRAINS PASS WITHIN 1m OF BUILDINGS THE WALL FOUNDATION SHALL BE TAKEN DOWN BELOW THE INVERT OF THE PIPE.
7. WHERE DRAINS DO NOT EXCEED 600mm DEEP, PLASTIC OR CLAY ACCESS FITTINGS MINIMUM DIAMETER 225mm SHALL BE USED. ELSEWHERE PROPRIETARY PLASTIC OR PRECAST CONCRETE INSPECTION CHAMBERS SHALL BE USED.
8. ALL GULLIES AND RAINWATER DOWNPIPES CONNECTED DIRECTLY TO DRAINS ARE TO BE RODDABLE.
9. LEVELS AT DRAINAGE ACCESS POINTS ARE INVERTS.
10. WHERE POSSIBLE, DRAINAGE RUNS SHOULD BE LAID AT A MINIMUM OF 3.0m FROM THE REAR OF PROPERTIES WHERE PRACTICAL TO ALLOW FOR FUTURE EXTENSIONS.
11. ALL DRAINAGE SHALL BE LAID UPSTREAM AND EACH RUN BETWEEN MANHOLES SHALL BE LAID COMPLETE PRIOR TO BACKFILLING. WHERE THIS IS NOT PRACTICAL TRIAL HOLES OR OTHER MEANS OF IDENTIFYING THE LINE AND LEVEL OF SERVICES SHALL BE CARRIED OUT PRIOR TO WORKS COMMENCING.
12. ALL BRANCH DRAINS, OR CONNECTIONS, ARE TO DISCHARGE TO THE COLLECTORS OBLIQUELY, AND IN THE DIRECTION OF THE MAIN FLOW.
13. ALL LOW SPOTS ON HARDSTANDING AREAS TO HAVE YARD GULLIES/ACO.
14. ALL ADOPTABLE SURFACE WATER LATERALS ARE TO BE 150mm UNLESS NOTED OTHERWISE.
15. ALL ADOPTABLE FOUL LATERALS ARE TO BE 100mm UNLESS NOTED OTHERWISE.
16. ALL PRIVATE FOUL CHAMBERS IMMEDIATELY OUTSIDE THE PROPERTY ARE TO BE A MINIMUM OF 750mm FROM THE FFL OR 600mm FROM THE EXTERNAL LEVEL.
17. ALL DRAINAGE TO BE ADOPTED UNDER A SECTION 104 AGREEMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH 'SEWERS FOR ADOPTION 7TH EDITION' INCLUDING THE DCWW ADDENDUMS.
18. REFER TO MANHOLE SCHEDULES FOR FURTHER INFORMATION.
19. ALL MANHOLE USED TO LATERAL DRAINS ARE TO BE EITHER TYPE 3 OR 4.
20. ALL LATERALS OF 100mm DIAMETER ARE TO HAVE A MINIMUM GRADIENT OF 1 IN 80 AND A MAXIMUM GRADIENT OF 1 IN 5.
21. ALL PIPE CONNECTIONS ARE TO BE SOFFIT TO SOFFIT CONNECTIONS UNLESS OTHERWISE SPECIFIED.

APPROVED DWR CYMRU WELSH WATER PLASTIC PIPE SYSTEMS ARE AS FOLLOWS:

- MARLEY TWINWALL SYSTEM
- UPONER ULTRARIB SYSTEM
- OSMA ULTRARIB SYSTEM
- POLYSEWER TWINWALL SYSTEM
- POLYPIPES – RIGISEWER (400mm–600mm AND 750mm–900mm)

PLEASE NOTE THAT THE INSTALLER MUST BE ACCREDITED WITH THE BRITISH PLASTICS FEDERATION (BPF).

CDM

CONSTRUCTION OF DEEP MANHOLES.

CONTRACTOR TO PRODUCE SUITABLE METHOD STATEMENT TO UNDERTAKE DEEP EXCAVATION WORK.

CONSTRUCTION OF LARGE 1:2 BATTER SLOPES.

CONTRACTOR TO PRODUCE SUITABLE METHOD STATEMENT IN LINE WITH SPECIFICATION FOR HIGHWAY WORKS SERIES 600 AND SEEK GEOTECHNICAL ADVICE

Revisions

Project:	Caerleon Campus Newport
Client:	REDROW
Drawing:	Section 73 Engineering Plan Sheet 4 of 4
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