



**ENGINEERING & PHASE 2 KEY**

- PROPOSED FINISHED FLOOR LEVEL
- RETAINING WALL (HEIGHT SHOWN IS REQUIRED UNLESS OTHERWISE STATED OTHERWISE (SAB ADAPTABLE))
- UNDRAINED BATTER MANHOLE 1:2
- PAVED WALL
- UNDERBOLD (ADDITIONAL BELOW SPIC LEVEL)
- STEPPED ACCESS (PART V)
- SPOT LEVEL
- PROPOSED CONTOURS
- GRAVEL BOARD
- SURFACE WATER MANHOLE & SEWER (SAB ADAPTABLE)
- SURFACE WATER CHAMBER & LATERAL TO BE 150mm (UNLESS STATED OTHERWISE (SAB ADAPTABLE))
- SURFACE WATER CHAMBER & LATERAL TO BE 150mm (PRIVATE)
- ROOFING EYE (PRIVATE) INVERT LEVEL TO BE MINIMUM 450mm BELOW GROUND LEVEL
- FOUL WATER MANHOLE & SEWER (DOWN ADAPTABLE)
- FOUL WATER CHAMBER & LATERAL TO BE 100mm (UNLESS STATED OTHERWISE (DOWN ADAPTABLE))
- FOUL WATER CHAMBER & LATERAL TO BE 100mm (PRIVATE)
- ALL ADAPTABLE MANHOLES IN THE HIGHWAY TO HAVE CHAMBERS IN SHARED DRIVES TO BE MINIMUM 600mm COVER
- ALL CHAMBERS IN PRIVATE DRIVES TO HAVE MINIMUM 600mm COVER
- ALL CHAMBERS USED TO LATERAL DRAINS ARE TO BE EITHER TYPE 3 OR 4
- ADAPTABLE ROAD GULLY
- STONE CRIP - 150mm TO REAR GARDENS AROUND PATIOS
- STONE CRIP - 250mm TO HIGH SIDE OF RETAINING WALL (OR LOW SIDE WHERE SHOWN)
- LINEAR DRAINAGE CHANNEL
- ADAPTABLE STREET LIGHTING
- TANKED BIO-RETENTION AREA WITH PROPOSED OVERFLOW GULLY
- ALITHON PRECAST HEADWALL
- SEL ENVIRONMENTAL DIFFUSER UNIT
- ADAPTABLE RAIN GARDEN OVER FLOW GULLY
- ADAPTABLE WATER BREAK INLET
- PERMEABLE PAVING (SAB ADAPTABLE)
- PERMEABLE PAVING (SAB ADAPTABLE)
- PRIVATE PERMEABLE PAVING
- PRIVATE PERMEABLE SUB-BASE (SEE FLOWING TYPE 5)
- PRIVATE RAIN GARDEN
- DOWN FLOWING FULL-DRAIN PIPE SYSTEM WITH 5mm SLOTS WITHIN PERMEABLE PAVING
- PRIVATE DELINEATION KERB
- 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
- WATER BUTT
- CHECK DAM

**PHASE 1 DRAINAGE KEY**

- PROPOSED ADAPTABLE SURFACE SEWER - Subject to SAB Approval
- PROPOSED ADAPTABLE FOUL SEWER - Subject to S104 Approval
- NEWPORT CITY COUNCIL HIGHWAY ADAPTABLE 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 band to the top of the swales to protect against erosion where levels will not allow greater width
- CELLULAR (PLASTIC) SURFACE WATER ATTENUATION TANK
- ALITHON 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 AREAS SHOWN BY RED OUTLINE
- PERMEABLE PAVING OVERFLOW YARD GULLY
- PRIVATE PERMEABLE CELL WITHIN PRIVATE DRIVEWAYS
- LINEAR DRAINAGE CHANNEL (150mm WIDE AT THRESHOLD OF GARAGE)
- CHANNEL DRAIN

**GENERAL NOTES**

- DO NOT SCALE FOR CONSTRUCTION PURPOSES.
- 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.
- POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING WORK.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ANY OTHER DRAWINGS, 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 DEVELOPER'S ENGINEER.
- ALL LEVELS ARE IN TERMS OF THE OS DATUM.

**DRAINAGE NOTES**

- ALL PRIVATE DRAINAGE SHALL BE IN ACCORDANCE WITH RELEVANT SECTIONS OF APPROVED DOCUMENT H OF THE BUILDING REGULATIONS.
- 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.
- PRIVATE HOUSE DRAINAGE WILL BE FLEXIBLY JOINTED PLASTIC OR CLAY PIPEWORK, DIAMETER 100mm UNLESS OTHERWISE NOTED.
- ALL CONNECTIONS FOR HOUSE DRAINAGE SHALL BE 100mm UNLESS NOTED OTHERWISE AND MUST EXTEND BEHIND THE BACK OF FOOTWAY/PAVEMENT/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 ADAPTABLE DRAINAGE SYSTEM TO BE 100mm.
- FOR PRIVATE DRAINS WHERE COVER TO PIPES IS LESS THAN 300mm IN AREAS OR 600mm IN OTHER AREAS PROTECTION IN THE FORM OF A 100mm THICK CONCRETE SURROUND.
- 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.
- 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.
- ALL GULLIES AND RAINWATER DOWNPIPES CONNECTED DIRECTLY TO DRAINS ARE TO BE ROADABLE.
- LEVELS AT DRAINAGE ACCESS POINTS ARE INVERTS.
- 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.
- ALL DRAINAGE SHALL BE LAID UPSTREAM AND EACH RUN BETWEEN MANHOLES SHALL BE LAID COMPLETE PRIOR TO BACKFILLING. WHERE THIS IS NOT PRACTICAL TRAIL HOLES OR OTHER MEANS OF IDENTIFYING THE LINE AND LEVEL OF SERVICES SHALL BE CARRIED OUT PRIOR TO WORKS COMMENCING.
- ALL BRANCH DRAINS, OR CONNECTIONS, ARE TO DISCHARGE TO THE COLLECTORS OBLOQUELY, AND IN THE DIRECTION OF THE MAIN FLOW.
- ALL LOW SPOTS ON HARDSTANDING AREAS TO HAVE YARD GULLIES/ACD.
- ALL ADAPTABLE SURFACE WATER LATERALS ARE TO BE 150mm UNLESS NOTED OTHERWISE.
- ALL ADAPTABLE FOUL LATERALS ARE TO BE 100mm UNLESS NOTED OTHERWISE.
- ALL PRIVATE FOUL CHAMBERS IMMEDIATELY OUTSIDE THE PROPERTY ARE TO BE A MINIMUM OF 750mm FROM THE FTI OR 600mm FROM THE EXTERNAL LEVEL.
- ALL DRAINAGE TO BE ADOPTED UNDER A SECTION 104 AGREEMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH 'SEWERS FOR ADOPTION' 17TH EDITION INCLUDING THE DOWM ADDENDUMS.
- REFER TO MANHOLE SCHEDULES FOR FURTHER INFORMATION.
- ALL MANHOLE USED TO LATERAL DRAINS ARE TO BE EITHER TYPE 3 OR 4.
- ALL LATERALS OF 100mm DIAMETER ARE TO HAVE A MINIMUM GRADIENT OF 1 IN 80 AND A MAXIMUM GRADIENT OF 1 IN 5.
- ALL PIPE CONNECTIONS ARE TO BE SOFFIT TO SOFFIT CONNECTIONS UNLESS OTHERWISE SPECIFIED.

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

- MANLEY TUNNALL SYSTEM
- UPONOR ULTRARAB SYSTEM
- OSMA ULTRARAB SYSTEM
- POLYSER TUNNALL SYSTEM
- POLYPIPES - ROSEMER (400mm-600mm AND 750mm-900mm)

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

**CONSTRUCTION OF DEEP MANHOLES**  
CONTRACTOR TO PRODUCE SUTABLE METHOD STATEMENT FOR DEEP MANHOLES  
CONSTRUCTION OF LARGE 1:2 BATTER SLOPES  
CONTRACTOR TO PRODUCE SUTABLE METHOD STATEMENT FOR LARGE 1:2 BATTER SLOPES  
WORKS SERIES 600 AND 600X GEOTECHNICAL ADVISE

**CDM**

A 16.12.2025 Updated to suit latest site layout.

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