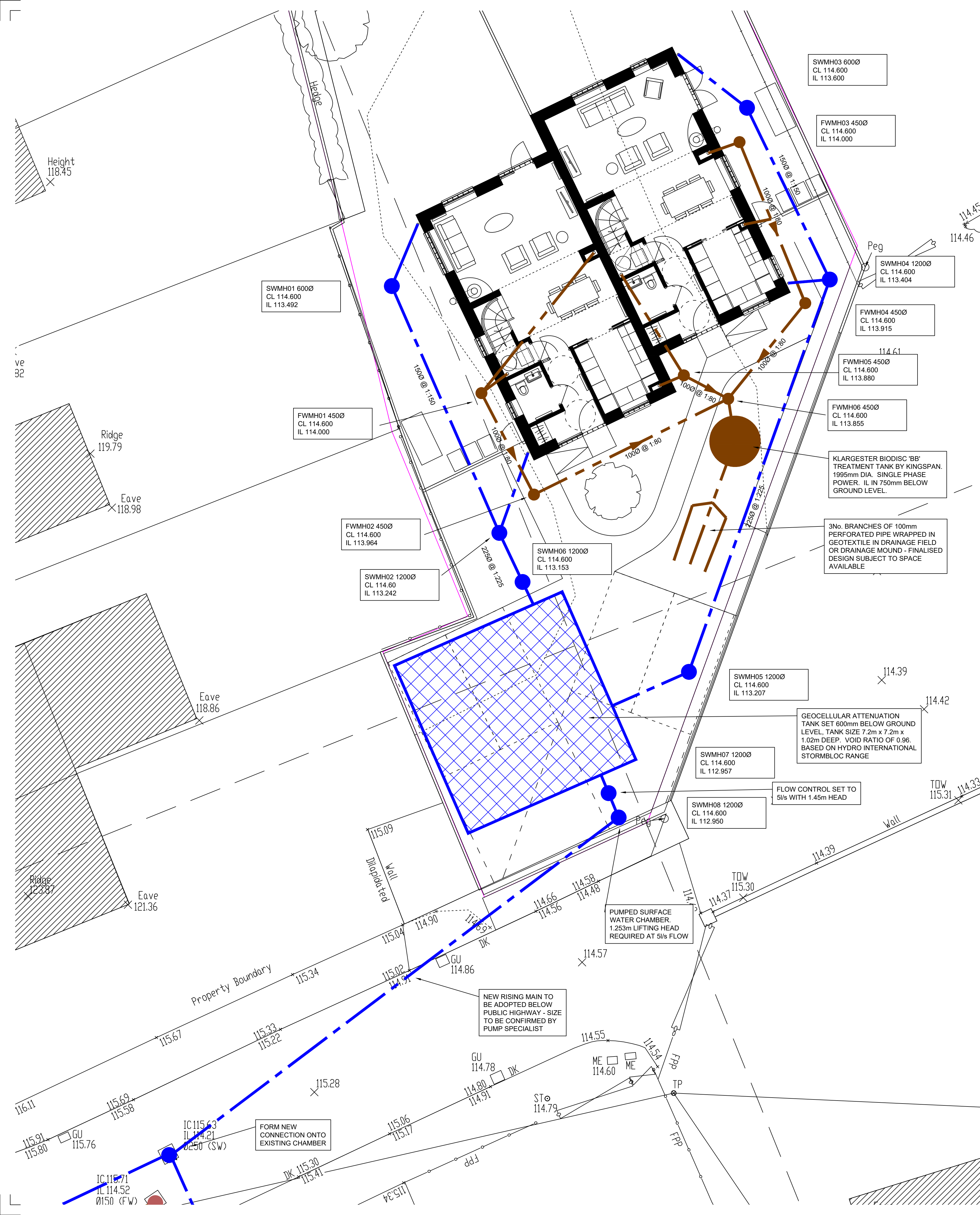




NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ENGINEER'S AND ARCHITECT'S DRAWINGS, DETAILS AND SPECIFICATIONS.
- OWNERSHIP OF PIPE NETWORKS ARE TO BE CONFIRMED PRIOR TO ANY DIVERSION WORKS.
- THIS DRAWING INDICATES DRAINAGE PRINCIPLES AND STRATEGY ONLY AND FURTHER DETAIL DESIGN IS REQUIRED FOLLOWING CONFIRMATION OF BUILDING SET OUT, PROPOSED LEVELS, PROPOSED INTERNAL POP UPS AND FURTHER DISCUSSIONS WITH ALL RELEVANT PARTIES REGARDING ALLOWABLE DISCHARGE.
- THE DEVELOPMENT HAS BEEN CONSIDERED AS BROWNFIELD IN ACCORDANCE WITH LLFA GUIDANCE.
- DURING THE DETAILED DESIGN PHASE, ALL STORM EVENT DURATIONS UP TO AND INCLUDING 6 HOURS WILL BE MODELLED TO DETERMINE THE FINAL STORAGE REQUIREMENT FOR THE DEVELOPMENT.
- ALL PROPOSED RESTRICTED FLOW RATES AND CONNECTION POINTS WILL BE SUBJECT TO HAFREN DYFRDWY (DWR CYMRU WELSH WATER) AGREEMENT AND APPROVAL.
- FOUL WATER FLOW RATES ARE ESTIMATED IN ACCORDANCE WITH BS EN 752:2008 AND DESIGNED FOR PEAK FLOW RATES.
- HAFREN DYFRDWY CONFIRMATION OF APPROVAL FOR THE FLOW RATE ENTERING THE PUBLIC SEWER WILL BE REQUIRED TO PROCEED WITH THE DETAILED DESIGN.
- ALL EXISTING ON-SITE DRAINAGE (ABANDONED OR LIVE) TO BE IDENTIFIED AND TERMINATED AT SITE BOUNDARY UNO.

SW DISPOSAL HIERARCHY STATEMENT

- USE ON SITE** - SUBJECT TO DETAILED DESIGN AND INPUT FROM M&E CONSULTANTS. POSITIONING OF GREYWATER AND RAINWATER HARVESTING TANKS MAY PROVE DIFFICULT. MAY PROVE TO BE ONLY USED IN CONJUNCTION WITH OTHER OPTIONS.
- INFILTRATION** - INITIAL GROUND INVESTIGATIONS INDICATE THE GROUND IS NOT SUITABLE FOR LONG TERM INFILTRATION.
- DISCHARGE TO WATERCOURSE** - NO NEARBY WATERCOURSES THAT WOULDN'T ENTAIL CROSSING THIRD PARTY LAND.
- DISCHARGE TO SURFACE WATER SEWERS** - PUMPED SYSTEM PROPOSED TO LIFT SURFACE WATER FROM PROPERTIES INTO PUBLIC SURFACE WATER SEWER WITHIN PROXIMITY OF THE DEVELOPMENT.
- DISCHARGE TO COMBINED SEWER** - THIS IS THE BACKUP OPTION IF SURFACE WATER IS NOT ACHIEVABLE.

SURFACE WATER STRATEGY:

THE DEVELOPMENT HAS BEEN DESIGNED IN ACCORDANCE WITH LLFA GUIDANCE WITH FLOW LIMITED TO 5l/s. DUE TO THE LEVELS, THE SURFACE WATER IS TO BE PUMPED UP TO THE NEAREST PUBLIC SEWER AS DEPICTED.

BASED ON AREAS SUPPORTED, MAXIMUM TOTAL STORAGE VOLUME OF 55m³ IS REQUIRED FOR THE SYSTEM FOR ALL STORM EVENTS UP TO AND INCLUDING THE 1:100 YEAR STORM + 40% CLIMATE CHANGE TO BE CONTAINED BELOW GROUND.

THIS IS A THEORETICAL PRELIMINARY DESIGN AS ASSUMPTIONS MADE MUST BE CONFIRMED (I.E. LEVELS, AREAS SUPPORTED). CONSTRUCTION STAGE DESIGN IS SUBJECT TO DETAILED DESIGN. DO NOT CONSTRUCT FROM THIS DRAWING.

FOUL WATER STRATEGY:

FOUL WATER WILL BE COLLECTED IN A SEPARATE SYSTEM TO SURFACE WATER. THIS WILL BE COLLECTED VIA PIPES & INSPECTION CHAMBERS.

DUE TO NATURAL RESOURCES WALES NUTRIENT NEUTRALITY REQUIREMENTS, THE VOLUME OF WATER ENTERING THE MAINS SEWER MUST BE REDUCED. THE NUTRIENT INPUT IS GOVERNED BY THE VOLUME OF WATER ENTERING THE SEWAGE TREATMENT WORKS AND NOT THE PHOSPHORUS CONTENT IN IT.

FOUL WATER WILL BE COLLECTED FROM EACH OF THE PROPERTIES AND PASS THROUGH A SEWAGE TREATMENT PLANT (ALSO KNOWN AS PACKAGE TREATMENT PLANT (PTP)) BEFORE DISPERSING - VIA AN INSPECTION CHAMBER (FOR WATER TESTING COLLECTION) - INTO A DRAINAGE FIELD OR MOUND.

THE SYSTEM WILL BE DESIGNED IN ACCORDANCE WITH THE UPDATED PHOSPHATE PERMIT REQUIREMENTS CONSIDERED IN THE CONTEXT OF THE LOCAL PLANNING AUTHORITY'S (LPA) HABITATS REGULATIONS ASSESSMENT (HRA) FOR SPECIAL AREAS OF CONSERVATIONS (SACs)

FURTHER GUIDANCE REGARDING SET OUT AND PRELIMINARY DESIGN OF A DRAINAGE FIELD OR MOUND IS PROVIDED WITH PART H OF THE BUILDING REGULATIONS.

ANNEX F REFERENCES THRESHOLDS WHICH NEED TO BE ADHERED TO - ALL OF WHICH THE DEVELOPMENT COMPLIES WITH.

PART H PROVIDES FURTHER SITING REQUIREMENTS - ALL OF WHICH THE DEVELOPMENT DOES ADHERE TO.

THE BINDING RULES SET OUT BY THE ENVIRONMENT AGENCY WILL ALSO BE FOLLOWED AS PART OF DETAILED DESIGN.

A SUITABLE PTP SYSTEM IS THE KLARGESTER BIODISC® BY KINGSPAN, THIS IS PROPOSED AND CAN SUPPORT A NUMBER OF PROPERTIES. THIS ALLOWS AEROBIC MICRO-ORGANISMS, NATURALLY FOUND IN SEWAGE, TO ESTABLISH ON A BIOLOGICALLY ACTIVE FILM OR BIOMASS. NATURAL BREAKDOWN OF SEWAGE CAN THEN OCCUR

WASTEWATER AND SEWAGE FLOWS INTO THE PRIMARY SETTLEMENT ZONE WHERE SOLIDS ARE SETTLED OUT AND RETAINED. THIS ACCUMULATED SLUDGE IS DRAWN OUT (BY PUMP) PERIODICALLY.

PARTIALLY CLARIFIED LIQUOR CONTAINING FINE SUSPENDED SOLIDS FLOWS UPWARDS INTO THE FIRST STAGE BIOZONE FOR BREAKING DOWN BY MICRO-ORGANISMS. SUSPENDED SOLIDS RETURN TO THE PRIMARY SETTLEMENT ZONE AND THE LIQUOR IS TRANSFERRED TO THE SECOND STAGE BIOZONE FOR FURTHER TREATMENT.

ANY SOLIDS REMAINING ARE SETTLED OUT IN THE FINAL SETTLEMENT TANK. THE VERY HIGH EFFLUENT QUALITY IS DISCHARGED TO EITHER THE PUBLIC SEWER OR A DRAINAGE FIELD (NETWORK OF PERFORATED PIPES BURIED BELOW GROUND TO ALLOW NATURAL INFILTRATION INTO THE GROUND).

THE SYSTEM USES SLOWLY ROTATING MECHANISM TO AGITATE THE TREATMENT PROCESS AND SO THERE IS A LOW ENERGY CONSUMPTION ELECTRIC MOTOR WITHIN THE SYSTEM.

THE DISCHARGE WILL THEN ENTER INTO A DRAINAGE FIELD OR MOUND.

ALL PROPOSED BELOW GROUND FOUL WATER DRAINAGE WILL COMPLY WITH BUILDING REGULATIONS PART H:2010, BS EN 12056-2:2000 AND BS EN 752:2008.

THE PROPOSED FOUL SEWER SYSTEM WILL BE DESIGNED TO HANDLE THIS FLOW RATE.

THE SETTING OUT GUIDANCE FROM PART H OF THE BUILDING REGULATIONS IS INCLUDED IN APPENDIX H.

GENERAL NOTES

- ALL CLANCY CONSULTING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS. SHOULD THERE BE ANY CONFLICT BETWEEN THE DETAILS INDICATED ON THIS DRAWING AND THOSE INDICATED ON OTHER DRAWINGS, CLANCY CONSULTING SHOULD BE INFORMED PRIOR TO CONSTRUCTION.
- DO NOT SCALE FROM ANY CLANCY DRAWING. IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY. ALL DIMENSIONS AND LEVELS ARE IN METRES UNLESS OTHERWISE STATED.
- UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITIES, IT SHALL BE UNDERSTOOD THAT ALL DRAWINGS ISSUED ARE PRELIMINARY AND NOT FOR CONSTRUCTION.
- ALL LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION, FOLLOWING FULL TOPOGRAPHICAL SURVEY, DRAINAGE LEVEL SURVEY INFORMATION AND CURRENT EXISTING SERVICES PLANS AND MAPS.
- ANY DISCREPANCIES MUST BE REPORTED TO CLANCY CONSULTING PRIOR TO THE COMMENCEMENT OR CONTINUANCE OF ANY FURTHER WORKS.

THE INDICATIVE DRAINAGE ARRANGEMENTS SHOWN ON EACH PLOT IS SUBJECT TO COORDINATION WITH THE ARCHITECT AND LANDSCAPE ARCHITECT FOR LEVELS, M&E CONSULTANT FOR POP-UPS.

THIS DRAWING IS FOR INFORMATION ONLY AND IS SUBJECT TO FURTHER DISCUSSIONS WITH THE RELEVANT AUTHORITIES AND SUBSEQUENT FURTHER DETAILED DESIGN - DO NOT CONSTRUCT FROM THIS DRAWING.

IT IS PROPOSED TO FORM A CONNECTION TO THE LIVE SEWER OUTSIDE THE DEVELOPMENT AS SHOWN SUBJECT TO FURTHER CCTV INVESTIGATIONS.

SHOULD THE RESULTS OF THIS CONCLUDE THAT THE CONNECTION IS NOT VIABLE, A NEW CONNECTION AND MANHOLE WILL BE REQUIRED RESULTING IN POTENTIAL ROAD CLOSURES.

DETAILS SHOWN ARE SUBJECT TO CONFIRMATION OF LAYOUTS, ABOVE GROUND DRAINAGE, CONFIRMATION OF EXISTING DRAINAGE INFRASTRUCTURE DETAILS AND AGREEMENTS FROM ALL REGULATORY BODIES.

THE STRATEGY SHOWN IS SUBJECT TO CONFIRMATION OF THE EXISTING DRAINAGE INFRASTRUCTURE (LEVELS, FALLS, PIPE DIAMETERS, ETC).

THE STRATEGY ASSUMES DUE TO LEVELS, PUMPING BE REQUIRED.

PUMPING WILL REQUIRE AN ALARM SYSTEM AND A STANDBY PUMP.

02	14.12.22	UPDATED AUTHORITIES	OB	MD	BRH
01	24.11.22	FOR INFORMATION	MD	MD	BRH
Rev	Date	Description	By	Check	App.

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