

GENERAL DRAINAGE NOTES:

- MH COVERS AND FRAMES TO CONFORM TO BS EN 124:
-D400 - SUITABLE FOR CARRIAGEWAYS, HARD SHOULDERS AND PARKING AREAS FOR ALL TYPES OF FAST MOVING VEHICLES
-B125 - SUITABLE FOR ALL OTHER AREAS
- TYPE S BEDDING AND SURROUND TO ALL PIPES EXCEPT IN THE FOLLOWING CIRCUMSTANCES, IN WHICH TYPE Z BEDDING AND SURROUND ARE TO BE USED:
-DOMESTIC GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS, 0.35m;
-DOMESTIC DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.5m;
-DOMESTIC DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENT) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.9m;
-AGRICULTURAL LAND AND PUBLIC OPEN SPACE, 0.9m;
-HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 1.2m.
- ALL EXISTING MANHOLE INVERTS TO BE CHECKED AND REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS. EXISTING PIPE CONNECTIONS ARE TO BE CCTV SURVEYED AND INSPECTED BY THE ENGINEER AND LOCAL AUTHORITY. IF THE PIPE CONNECTION IS FOUND TO BE DAMAGED OR IN DISTRESS, THE CONTRACTOR IS TO CARRY OUT REMEDIAL WORKS OR PROVIDE A NEW CONNECTION TO THE EXISTING SEWER PIPE SIZE AND GRADIENT TO BE DETERMINED BY THE ENGINEER.
- THE GRADIENTS INDICATED AGAINST THE DRAIN RUNS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL INSTALL DRAINS TO THE INVERT LEVELS SHOWN FOR EACH MANHOLE OR OTHER INDICATED POSITION.
- ALL PLOT FOUL DRAINAGE TO BE MINIMUM 100mm DIAMETER UNLESS OTHERWISE NOTED.
- ALL JOINTING IN ACCORDANCE WITH MANUFACTURERS TECHNICAL ADVICE & SPECIFICATION.
- ALL NON ADOPTABLE DRAINAGE TO BE THE STANDARD UPVC 110mm, 160mm DRAINAGE AND MANUFACTURED TO BS-EN 1401 AND BS 4660 UNLESS NOTED OTHERWISE.
- ALL STORM WATER DRAINAGE TO BE A MINIMUM OF 150mm DIAMETER UNLESS OTHERWISE NOTED.
- SOIL & VENT PIPE LOCATION AND NUMBER TO BE CONFIRMED WITH ARCHITECT.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS DRAWINGS, TOGETHER WITH THEIR LATEST SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER (VALE CONSULTANCY) AS SOON AS POSSIBLE.
- FIGURED DIMENSIONS ONLY TO BE USED. ANY QUERIES OR DISCREPANCIES TO BE REFERRED TO THE ENGINEER (VALE CONSULTANCY) IMMEDIATELY.
- TEMPORARY WORKS DESIGN BY OTHERS.
- DESIGN RISK ASSESSMENTS AND METHOD STATEMENTS ARE TO BE PROVIDED TO THE PRINCIPLE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORKS.

PLANTING SCHEDULE - DETENTION BASIN

PLANTING MIX PROPOSED WITH WILDFLOWER TURF (WFT-SUD-37). THE SPECIES WITHIN THE PLANTING MIX CAN BREAK UP SOIL COMPACTION, PROMOTE WATER DISPERSAL, AND WITHSTAND DROUGHT AND PERIODIC FLOODING. THEY REQUIRE MINIMAL MAINTENANCE AND ENHANCE BIODIVERSITY. THE UNIQUE 'SOIL-LESS' TURF IS DROUGHT TOLERANT AND COMPOSED OF 37 SPECIES, WITH A MINIMUM OF 50% WILDFLOWERS. THE TURF CREATES A DIVERSE HABITAT FOR BIRDS, MAMMALS, BEES, BUTTERFLIES, AND OTHER INVERTEBRATES.

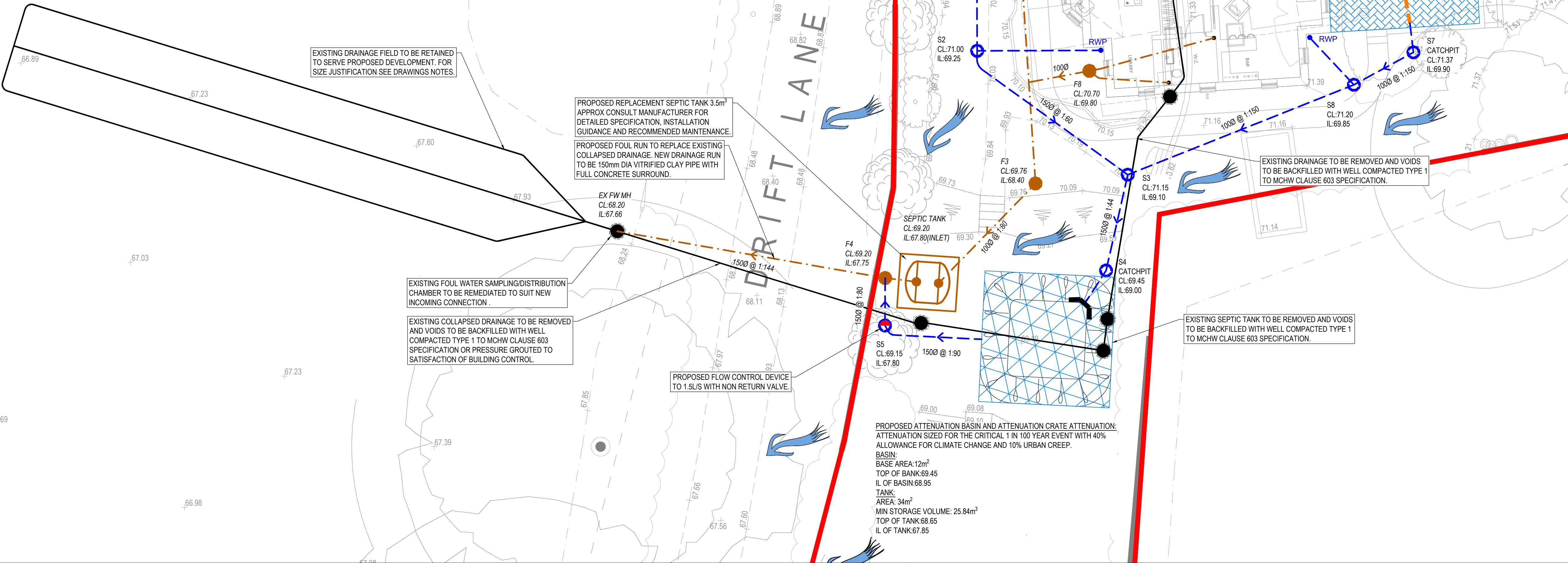
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE SHOWN IN METRES UNLESS NOTED OTHERWISE.
- DO NOT SCALE FROM THE DRAWING. USE FIGURED DIMENSIONS ONLY.
- ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- EXISTING SERVICES HAVE NOT BEEN SHOWN BUT ARE PRESENT - THE CONTRACTOR IS TO LIAISE WITH ALL STATUTORY AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY WORKS.

DRAINAGE LEGEND

- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED FOUL WATER DRAINAGE
- EXISTING COMBINED DRAINAGE
- EXISTING SURFACE WATER DRAINAGE
- EXISTING FOUL WATER DRAINAGE
- PROPOSED RAINWATER PIPE
- DENOTES FLOW CONTROL CHAMBER
- PROPOSED PERFORATED PIPE
- PROPOSED HEADWALL
- GEO-CELLULAR TANK 1 IN 100 YEAR EVENT WITH ACCESS POINTS
- EXISTING SPOT LEVEL
- PERMEABLE PAVING
- SITE BOUNDARY
- FLOW EXCEEDANCE ARROW

0 1000 2000 3000 4000 5000 mm
SCALE 1:100



DRAINAGE STRATEGY NOTES:

- THE EXISTING SITE CURRENTLY DRAINS SURFACE WATER RUNOFF AND FOUL WATER FLOW TO AN EXISTING DRAINAGE FIELD LOCATED IN ADJACENT LAND VIA AN EXISTING SEPTIC TANK. EXISTING DRAINAGE IS SHOWN ON THIS DRAWING AND ON THE DRAINAGE SURVEY DRAWING.
- IT IS CONSIDERED APPROPRIATE TO DRAIN THE SITE IN A SIMILAR MANNER TO THE EXISTING SITUATION WHILE PROVIDING BETTERMENT OVER THE EXISTING CONDITION.
- PERMEABLE PAVED PARKING AREAS (260m²) HAVE BEEN DESIGNED TO ALLOW SURFACE WATER RUNOFF TO FILTER THROUGH THE PERMEABLE PAVED SURFACE AND BE STORED WITHIN THE VOIDS OF A FILTER ZONE OF POROUS SUB-BASE LOCATED BENEATH THE BEDDING LAYER BEFORE BEING COLLECTED AND DRAINED VIA A TRADITIONAL DRAINAGE NETWORK.
- RUNOFF FROM BUILDING AND REMAINING HARDSTANDING AREAS (300m²) HAS BEEN DESIGNED TO DRAIN VIA A TRADITIONAL NETWORK OF UNDERGROUND PIPEWORK TO AN ATTENUATION BASIN UNDERLAIN BY CELLULAR STORAGE CRATES THAT HAS BEEN DESIGNED TO ATTENUATE FLOWS FOR ALL STORM RETURN PERIODS UP TO AND INCLUDING A 1 IN 100 YEAR EVENT PLUS 40% CC.
- SURFACE WATER FLOWS ARE DESIGNED TO DISCHARGE TO THE EXISTING DRAINAGE FIELD AT A RESTRICTED RATE OF 1.5L/S VIA A FLOW CONTROL DEVICE. THE RATE OF 1.5L/S IS BASED ON THE EXISTING DRAINED AREA OF 218m² AT A RATE OF 35mm/hr WITH A BETTERMENT OF 30%.
- FOUL WATER FLOWS GENERATED BY THE DEVELOPMENT ARE DESIGNED TO BE PRIMARILY COLLECTED VIA A SEPTIC TANK SIZED FOR MAXIMUM OCCUPANCY OF THE DEVELOPMENT BEFORE DISCHARGING TO THE EXISTING DRAINAGE FIELD THAT IS CONSIDERED APPROPRIATELY SIZED TO THE AVERAGE OCCUPANCY OF THE DEVELOPMENT.
- SOAKAWAY TESTING HAS BEEN CARRIED OUT IN ACCORDANCE WITH BRE 365. THE FINDINGS SHOW THAT INFILTRATION TECHNIQUES ARE UNSUITABLE FOR THIS SITE WITHIN THE IMMEDIATE BOUNDARY SHOWN IN RED.
- STANDARD 1 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE DUE TO THE DISCHARGE METHOD OF SURFACE WATER BEING THE HIGHEST PRACTICE DISCHARGE PRIORITY METHOD OF DISCHARGING THE SURFACE WATER RUNOFF TO THE GROUND AS THE DEVELOPMENT HAS LITTLE NEED FOR NON POTABLE WATER.
- STANDARD 2 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE AS INTERCEPTION CAN BE ASSUMED TO BE IN COMPLIANCE FOR ANY SYSTEM THAT DISCHARGES TO THE GROUND FOR ANY EVENT GREATER THAN THE CRITICAL 1 IN 1 YEAR EVENT.
- STANDARD 3 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE AS SHOWN BY THE CAUSEWAY FLOW CALCULATIONS INCLUDED IN THE PLANNING PACKAGE FOR THIS SUBMISSION. EXCEEDANCE FLOW ROUTES ARE PROPOSED TO REMAIN AS EXISTING THEREFORE NOT INCREASING ANY FLOOD RISK TO THE SURROUNDING AREA OR PROPERTY.
- STANDARD 4 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE DUE TO THE INCLUSION OF VARIOUS TREATMENT FEATURES INCLUDING PERMEABLE PAVING AND AN ATTENUATION BASIN. THESE FEATURES PROVIDE AMPLE TREATMENT FOR RESIDENTIAL ROOF AND DRIVEWAY AREAS.
- STANDARD 5 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE DUE TO INCLUSION OF ATTRACTIVE OPEN SPACES ON THE DEVELOPMENT.
- STANDARD 6 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE DUE TO THE INCLUSION OF AN ATTENUATION BASIN A MINIMISATION OF DESTRUCTION OF EXISTING GREEN OPEN AREAS.
- STANDARD 7 OF THE NATIONAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS HAS BEEN MET ON THIS SITE. SEE SUPPLEMENTARY CONSTRUCTION DETAILS DRAWINGS AND MANAGEMENT AND MAINTENANCE PLAN FOR FURTHER DETAILS.

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Project
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Title
DRAINAGE STRATEGY

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DRAWING STATUS
A - Approval, AB - As-Built, C - Construction, D - Draft, P - Preliminary, T - Tender