



SURFACE WATER DRAINAGE

THE SUDS HIERARCHY DEMANDS THAT SURFACE WATER RUN OFF SHOULD BE DISPOSED OF AS HIGH UP THE FOLLOWING LIST AS PRACTICALLY POSSIBLE:

- INTO THE GROUND (INFILTRATION) AND RE-USE, OR THEN;
- TO A SURFACE WATER BODY, OR THEN;
- TO A SURFACE WATER SEWER, HIGHWAY DRAIN OR ANOTHER DRAINAGE SYSTEM, OR THEN;
- TO A COMBINED SEWER.

NO EXISTING SEWER RECORDS OR EXISTING UTILITIES RECORDS HAVE BEEN OBTAINED AT THE TIME OF PRODUCING THIS DRAWING, THEREFORE NO PROVISION FOR PUMPING STATIONS OR UTILITIES SERVICES ALLOWED. FURTHER CONSTRAINTS MAY BE INDICATED ONCE FURTHER SURVEY WORKS UNDERTAKEN.

THERE IS A WATERCOURSE RUNNING THROUGH THE SITE WHICH APPEAR TO BE HEADING FROM SOUTH TO NORTH (USING GOOGLE EARTH ELEVATION) AND THEN OUT NORTH-WEST PAST THE SITE BOUNDARY TOWARDS THE RIVER CLYST.

THE MAJORITY OF THE SITE IS LOCATED WITHIN FLOOD ZONE 1, THERE IS A SMALL AREA THAT RUNS THROUGH THE CENTRE OF THE SITE AND ALONG THE NORTHERN EDGE THAT IS LOCATED WITHIN FLOOD ZONE 3. THE AREA IS CURRENTLY A GREENFIELD. NO OTHER FLOOD ZONE 3 AREAS ON INDICATED ON SITE.

THE BRITISH GEOLOGICAL SURVEY MAPPING INDICATES SITE IS UNDERLAIN BY EXMOUTH MUDSTONE AND SANDSTONE FORMATION - MUDSTONE. SOILSCAPES GROUND DATA SHOWS SITE IS UNDERLAIN BY SLIGHTLY ACID LOAMY AND CLAYEY SOILS WITH IMPEDED DRAINAGE.

GROUND INVESTIGATIONS AND A SERIES OF INFILTRATION TESTS WILL NEED TO BE CARRIED ACROSS THE ENTIRE SITE AREA IN ORDER TO ESTABLISH IF THE USE OF SOAKAWAYS IS VIABLE FOR THIS SITE. HOWEVER BASED ON THE SOILSCAPES DATE THIS WILL BE UNLIKELY.

BASED ON GOOGLE EARTH MAPPING (FURTHER LEVELS INFORMATION REQUIRED) THERE IS A HIGH POINT THE CENTRAL NORTH AREA OF THE SITE, AND THE LAND FALLS EITHER SIDE TOWARDS THE NEAREST WATERCOURSE (SEE FLOW ARROWS IF UNSURE)

THEREFORE, POSSIBLE OPTIONS AVAILABLE:

OPTION 1 - GRAVITY FED SYSTEM TO ATTENUATION BASINS

CONSTRUCT TRADITIONAL DRAINAGE SYSTEMS, WITH LATERALS FOR DWELLINGS AND OUTFALL TO ATTENUATION BASINS WITHIN EACH DEVELOPMENT PARCEL. THIS WILL ALSO NEED TO INCORPORATE SEVERAL SUDS OPTIONS WHICH CAN ASSIST IN WATER QUALITY AND BIODIVERSITY. THESE WOULD THEN DISCHARGE TO THE EXISTING WATERCOURSES THROUGHOUT THE SITE AT A RUN OFF RATE TO MATCH, OR LESS THAN, THE EXISTING GREENFIELD RUN-OFF.

THE AREAS OF THESE BASINS WOULD NOT BE PERMANENTLY WET SO THESE AREAS CAN ALSO ACT AS OPEN SPACE AREAS AND FEATURES. UPON AGREEMENT WITH THE LOCAL AUTHORITY AND LLFA (LEAD LOCAL FLOOD AUTHORITY)

OPTION 2 - GRAVITY FED SYSTEM TO UNDERGROUND STORAGE

CONSTRUCT TRADITIONAL DRAINAGE SYSTEMS, WITH LATERALS FOR DWELLINGS AND PROVIDE UNDERGROUND STORAGE IN THE FORM OF ATTENUATION TANKS, PERMEABLE PAVING AND/OR OVERSIZED PIPES WITHIN EACH DEVELOPMENT PARCEL. THIS WILL ALSO NEED TO INCORPORATE SEVERAL SUDS OPTIONS WHICH CAN ASSIST IN WATER QUALITY AND BIODIVERSITY. THESE WOULD THEN DISCHARGE TO THE EXISTING WATERCOURSES THROUGHOUT THE SITE AT A RUN OFF RATE TO MATCH, OR LESS THAN, THE EXISTING GREENFIELD RUN-OFF.

EXISTING WATERCOURSES / DITCHES

IT SHOULD BE NOTED THAT AN EASEMENT/MAINTENANCE STRIP IS REQUIRED ALONG THE EDGE OF ALL WATERCOURSE AND DITCHES. THIS IS MEASURED FROM THE TOP OF THE BANK AND IS USUALLY BETWEEN 6.0m - 9.0m WITH NO PLANTING OF ANY TREES OR VEGETATION WITHIN THE EASEMENT.

SUSTAINABLE DRAINAGE SYSTEMS (SuDS)

TYPES OF SUSTAINABLE DRAINAGE SYSTEMS AVAILABLE INCLUDE:

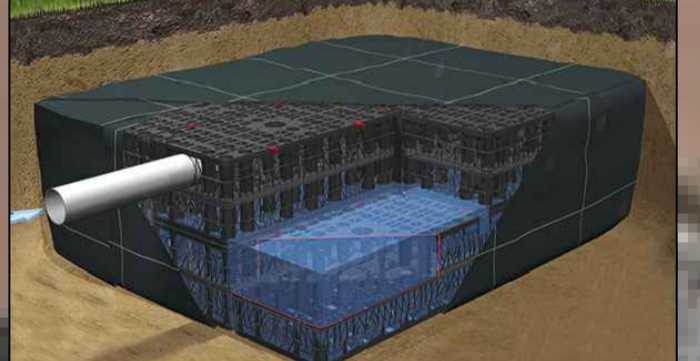
- INFILTRATION SYSTEMS (SOAKAWAYS, ETC.)
- FILTER DRAINS
- SWALES
- BIORETENTION SYSTEMS
- TREES
- DETENTION BASINS & PONDS
- WETLANDS
- PERMEABLE PAVING
- UNDERGROUND STORAGE SYSTEMS



EXAMPLE OF SHALLOW SWALE BETWEEN DRIVEWAYS



EXAMPLE OF FILTER TRENCH ARRANGEMENT



EXAMPLE OF SOAKAWAY GRATE SYSTEMS



EXAMPLE OF DRY ATTENUATION BASIN



EXAMPLE OF DRY SWALE ADJACENT TO HIGHWAY AND DWELLINGS

- NOTES:**
1. WATERCOURSES, FLOOD ZONES AND RED LINE BOUNDARY ARE BASED ON AUTODESK MAPPING AND ARE SUBJECT TO CHANGE.
 2. ANY FLOW AND/OR FALL INFORMATION IS BASED ON GOOGLE EARTH ELEVATION TOOL AND IS SUBJECT TO CHANGE.

REV	DATE	DESCRIPTION	ET	LAJ
P1	211222	First Issue		

Drainage Constraints Information

Land at Clyst Honiton Exeter

CLIENT: Land Value Alliances LLP

DATE	SCALE	TEAM/DRAWN BY	APPROVED BY
21122022	1:2500 @ A1	ET	LAJ

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P18-2911	SO	