

Connections and Discharges Surface water drains. Connect all new surface water drains to existing surface water drains. All existing surface water drainage to be inspected and made good.

Drainage

drain via gully and trap to soakaway in adjacent fi

developers ownershi

Foul drainage treatment. Connect all new foul waste to new separate foul drain to new Septic tank/Biodisc system with sultable lenght and volume filtration trench system. Both the type of treatment works and the size of the filtration trench are to be designed to suit the site conditions to be determined by a ground percolation test carried p ut to the BS 6297:1983. This test is to be carried out prior to the Building Regulations application and submitted with it for approval by Building Control. The exact position of the treatment and filtration are to be determined on site. In this case the developer own the adjacent field where the new treatment plant is situated.

The drainage installation has the benifit of approval from the Environment Agency Consent number 017490402 dated 9th. July 2004

Specification: New soil and surface water draimage: Hepworth Supersleeve or similar spun clay 100 mm. diameter pipes with u.p.v.c. flexible sealed collars laid in clean square cut trenches at a gradient of not less than 1: 60 fall. Carefully back fill trenches with layered back fill strictly in accordance with the manufacturers instructions. All fittings including manholes, inspection chambers, back inlet gullies etc. to be from the same range and supplier. Set all preformed gullies and chambers on 150 mm. concrete bases and surround with 150 mm. sleeves. Fit gullies with plastic or galvanized grills. Fit manholes and inspection chambers with steel rims and covers, as supplied by the manufacturer set in mortar surrounds. Where manholes exceed 900 mm. deep form manholes in class A engineering/bricks off 150 mm. solid concrete bases and form hanching to pipes and channels with smoothed concrete. Set manhole covers onto pre formed r.c. covers where manholes internal size is greater than 450 mm. x 600 mm. which is the minimum acceptable internal dimension for a 900 mm. deep manhole.

Drain Lines The new drain lines shown are illustrative. The builder should determine the best connections on site with the approval of the Building Inspector.



Foul Drain treatment works.

Foul sewer treatment and filter

bed in adjacent field. Exact

location to be determined to

suite site conditions but to be

no less than 15 metres from

the dwelling house.

Ground conditions **1.31** Well drained and well aerated subsoils are usually brown, yellow or

colour. Examples of subsoils with good percolation characteristics are sand, gravel, shalk, sandy loam and clay loam. It is important that the percolation characteristics are suitable in be and winter conditions. Poorly drained or saturated subsoils are often grey or blue in colour. Brown and grey mottling usually indicates periodic saturation. Examples of subsoils with poor percolation characteristics are sandy clay, silty clay and clay.

1.32 A preliminary assessment should be carried out including consultation with the Environment Agency and local authority to determine the suitability of the site. The natural vegetation on the site should also give an indication of its suitability for a drainage field. **1.33** A trial hole should be dug to determine the position of the standing ground water table. The trial hole should be a minimum of 1m2 in area and 2m deep, or a minimum of 1.5m below the invert of the proposed drainage field pipework. The ground water table should not rise to within 1m of the invert level of the proposed effluent distribution pipes. If the test is carried out in summer, the likely winter groundwater levels should be considered. A percolation test should then be carried out to assess the further suitability of proposed area.

1.34 Percolation test method - A hole 300mm square should be excavated to a depth 300mm below the proposed invert level of the effluent distribution pipe. Where deep drains are necessary the hole should conform to this shape at the bottom, but may be enlarged above the 300mm level to enable safe excavation to be carried out. Where deep excavations are necessary a modified test procedure may be adopted using a 300mm earth auger. Bore the test hole vertically to the appropriate depth taking care to remove all loose debris. **1.35** Fill the 300mm square section of the hole to a depth of at least 300mm with water and allow it to seep away overnight. **1.36** Next day, refill the test section with water to a depth of at least 300mm and observe the time, in seconds, for the water to seep away from 75% full to 25% full level (i.e. a depth of 150mm). Divide this time by 150mm. The answer gives the average time in seconds (Vp) required for the water to drop 1mm. **1.37** The test should be carried out at least three times with at least two

trial holes. The average figure from the tests should be taken. The test should not be carried out during abnormal weather conditions such as heavy rain, severe frost or drought.

1.38 Drainage field disposal should only be used when percolation tests indicate average values of Vp of between 12 and 100 and the preliminary site assessment report and trial hole tests have been favourable. This minimum value ensures that untreated effluent cannot percolate too rapidly into ground water. Where Vp is outside these limits effective treatment is unlikely to take place in a drainage field. However, provided that an alternative form of secondary treatment is provided to treat the effluent from the septic tanks, it may still be possible to discharge the treated effluent to a soakaway.





SITE LAYOUT PLAN PROVISIONAL