

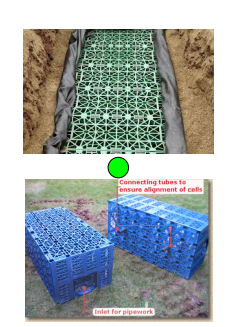
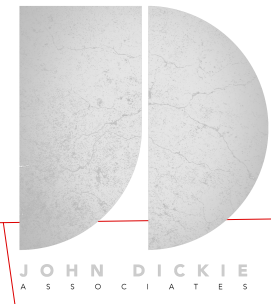
UNDERGROUND FOUL DRAINAGE
 Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1: 2009.

Excavating / Backfilling ;
 Lower part of trench :-
 From bottom to 300mm above crown of pipe the trench must have vertical sides and be of a width as small as practicable but not less than external diameter of pipe plus 300mm or larger dimension if specified.
 Formation for beds generally :-
 Excavate to formation immediately before laying beds or pipes.
 Remove mud, rock projection, boulders and hard spots and replace with consolidated bedding material.
 Harden local soft spots by tamping in bedding material.

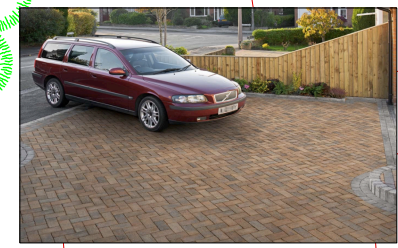
INSPECTION CHAMBERS
 Generally, underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways. Inspection chambers to be located as shown on drawings.
 Exact depth and size to be agreed on site with Building Inspector.
 For chambers with inverts of less than 900mm use Hepworth preformed polypropylene chambers or equal approved.
 Other chambers to be formed in brickwork.
 Inspection chambers with inverts greater than 900mm to be purpose built as follows :
 225mm thick brick walls in semi-engineering brick laid in English-Bond. Bricks with frogs to be laid with frogs uppermost.
 Heavy duty covers and frames in roads and parking areas, medium duty elsewhere.
 Joints to be formed with waterproof mortar and to be flush and smooth.
 Walls to be built of minimum 150mm thick concrete base and dimensions not less than outside dimensions of chamber.
 Exact depth and size of chambers to be agreed on site with Building Inspector.
 Back inlet gullies to be bedded and surrounded in 150mm concrete. Gullies to be roddable.
 Connection to off site sewers to Local Authority details.

Manhole Covers and Frames ;
 The manhole covers and frames for roads shall be the heavy duty cast iron non-rocking three-point suspension type, constructed in tow triangular section and linked together with mild steel bolts, all in accordance with BS.497 (Grade A). They shall be to BS Ref: MA60 or have a 600mm x 600mm clear opening and be either Drainage Castings "Silent Knight" range, cast iron No. DC5037 (Broad No. 70C) or ductile iron No. DC5050 or Stanton and Staveley "Chieftain" ductile iron SS118 or Drainage Castings "Dreadnought" range ductile iron No. DC50553. The medium duty pattern manhole covers and frames for fitment on roads shall be of cast iron and weigh not less than 100kg (2cwt), all in accordance with BS.497 (Grade B). They shall be of the circular type to give clear opening of 600mm (24") or may alternatively be to BS Ref: MB2 - 60/60 with 600mm x 600mm clear opening.

Minimum Flow Rates and Location of Fire Hydrants are:
 Housing
 Minimum of 8 l/sec (480 l/min) for detached or semi-detached of not more than two floors up to 35 l/sec (2100 l/min) for units of more than two floors, from any single hydrant on the development.



SOAKAWAY CRATE DETAILS



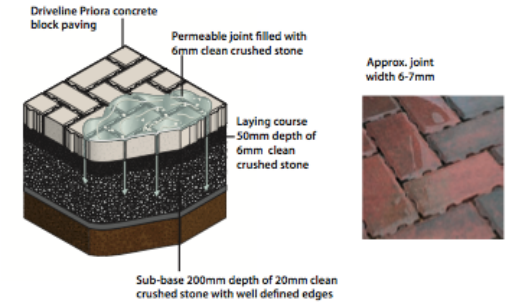
Burnt Ochre Pavours (BO)



Stabilised Gravel



Pennant Grey Pavours (PG)



AVK CLEARWAY HYDRANT

Tegula Priora
 Permeable Paving System

- Permeable Concrete Sets
- Colour finishes and 3 joint sets with patented interlocking rib design
- Block to require the benefits of Pava for protection from frost and salt
- Permeable joints provide ventilation to complement permeable concrete or porous aggregate above joint covering holes with shims
- Permeability: Random Course - 17000 l/m²/hr @ 100mm head
 Herringbone - 14200 l/m²/hr @ 100mm head
- Suitable for use in parking applications - non-slip surface finish
- Typical applications: Civil, Road, Commercial, Residential, Streetscaping and Access Highways
- Complementary products: Tegula, Tegula Cobble, Tegula Kerb Set and Generation Set
- Complies with BS EN 12460:2018
- Block Pattern: Random Course Herringbone
- To maintain the permeability properties of the Priora tile design products have been designed for specific joint systems. Long joints are not recommended between patterns.
- Regulation can be achieved for all water installation. See page 46 of the Permeable Paving Design Guide.
- For use with the Manufacture range of sub-base components.

Colours
 Photographic and surface texture should be judged from actual materials rather than photographic representations.

Proposed Residential Development at Church Farm Barn and East Barn, Kettlestone Norfolk NR21 0JH

Drawing : Proposed Drainage Layout
 Client : D and S Ross
 November 2019
 Scale 1 to 500

Drawing No JDA/2016/600/DRAINAGE/PL.001B
 Rev A Jan 2020 Change of house type for Plot Six and further minor amendments following observations from the LPA. Fire Hydrant added to scheme design
 Rev B May 2020 Plots 7 and 8 changed to single storey dwellings

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PLANNING APPLICATION DRAWING

All Saints' Church
 Path

Church Court

Church Farm House

ORCHARD GROVE

90mm HPPE