Scott White

Guide to Drainage v.1

Responsibilities:

Responsibility of OCC – The County Council has responsibility for highway drainage, we remove water from the highway via Sustainable Drainage Systems (SuDS). This can be by positive drainage, gullies, soakaways (built work) or natural drainage via grips

Responsibility of the land owner – Landowners are responsible for private land drainage including ditches and private culverts, which drain private land into the drainage system. The majority of roadside ditches are privately owned and maintained. Non clearance of these can result in flooding of the highway and adjacent land.

Responsibility of District Councils – District Councils have responsibility for ensuring that private land owners maintain their drainage facilities.

Types of Drainage Facility

Drainage Grips - A highway grip is a shallow ditch connecting the road edge to the roadside ditch. Its purpose is to drain water from the highway into the roadside ditch.

Highway verge grip

Scott White

Ditch – a channel dug at the side of a road or field, to hold or carry away water. Maintenance of the ditch is normally the responsibility of the adjacent private land owner. OCC only maintain ditches we have constructed as part of road works

Ditch

Culvert - A culvert is a pipe or engineered channel carrying water. Oxfordshire County Council is responsible for the maintenance of culverts where they run under the highway.

Culvert

Scott White

Gully and kerb drainage – A gully is a pot in the ground on the kerb edge of the carriageway and catches water to stop the road flooding. The gully links to the drainage system. The gully has a small catchpit at the bottom to catch detritus which can then be cleared using the gully cleaning wagon. A standard gulley has a 450mm x 450mm grate on top to prevent large detritus entering the system and blocking it.

Gully

Weir Offlet - the kerb collects the water rather than a gully grating in the road. There could be a catchpit or sump behind the kerb. It is the kerb that catches the water usually by an opening in the kerb (kerb offlet).

Weir Offlet

Scott White

Kerb offlet – Is essentially the same as a gully but it is situated within the kerb line instead of the carriageway.

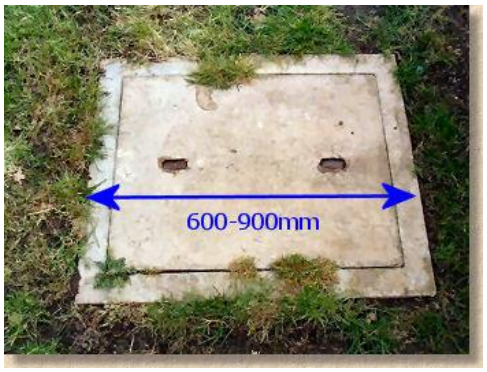
Kerb offlet

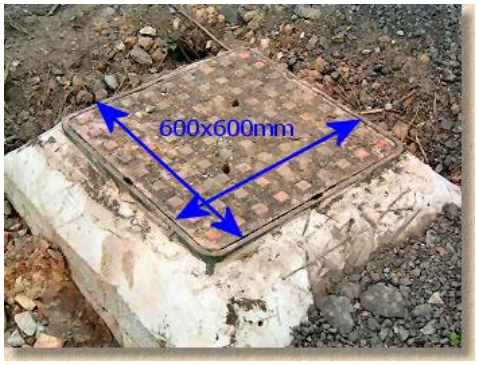
Beany block - it's a hollowed-out kerb with inlets on the face. Water from the carriageway falls into the internal 'pipe' and is then directed via the drainage system to a suitable place of disposal.

Beanie Block

Scott White

Manhole - Manholes are chambers providing access to the drainage system for maintenance. In some cases they are large enough for operatives to enter the system itself

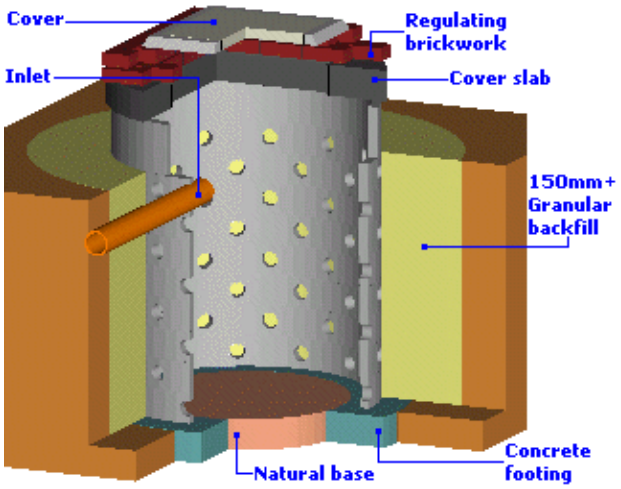




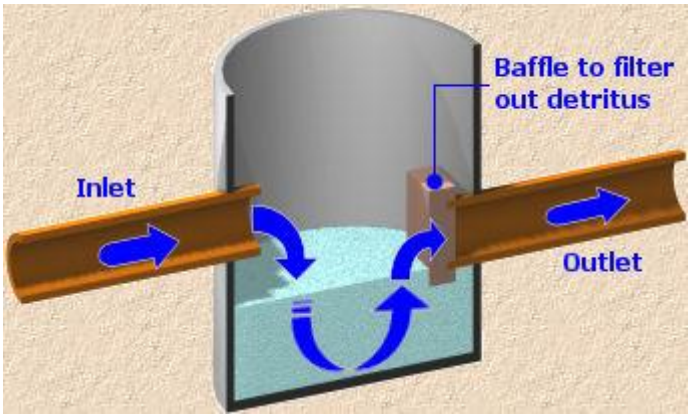
Soakaway – A Soakaway is a chamber where the surface water is collected and the infiltrates into the ground.

Catchpits – A Catchpit is a manhole, which collects silt which allows for easy removal of the silt.

SoakAway



CatchPit



Scott White

French Drain – There are two types of French Drain. 1. A ditch filled with large clean stone which allows water to dissipate into the ground. 2. A ditch containing a perforated pipe and covered with clean stone which allows water into the pipe and then dispersed into the drainage system.

French Drain 1.

French Drain 2.

Scott White

Ponds – A pond is a temporary storage area for water.

Pond

Swale – A Swale is a shallow ditch into which highway water disperses.

Swale

Scott White

Headwalls – A headwall is a structure used at the intersection where p9ositive drainage ceases and becomes natural drainage. .

Headwall

April 2015