Design Considerations

Selection of gullies is usually the responsibility of the specifying engineer conversant with the floor construction, flooring finish, drainage system and the operations or functions designated for the particular building area. Some of the factors that should be considered when selecting gullies are given below:

BUILDING REGULATIONS/ STANDARDS

Local regulations must be complied with in matters concerning sanitary pipework and drainage.

A trapped gully may be used where a water seal is required to prevent foul air from entering a building; different versions are available – Bell, Bottle, 'P', 'Q', and 'S'. In other cases a non-trapped gully may be used with a trap installed in the drain line.

LOAD RATING

It is essential that gullies withstand expected loads. This catalogue shows the load rating class for each grating, cover or gully assembly, based on BS EN 1253, as follows:

K3 - Areas without vehicular traffic, such as bathrooms, shower areas, retirement homes, hotels, schools, swimming baths, leisure centres, balconies, terraces and roof gardens.

L15 - Areas with light vehicular traffic such as cycleways and domestic drives.

M125 - Areas with vehicular traffic, such as car parks, factories and workshops – not including light commercial vehicles or heavy wheel loads.

The load rating of certain gratings is also shown in N/mm^2. All such ratings are based on static loads.

FLOW RATE

Flow rate is the maximum amount of water (litres/sec) which a gully will drain, and is influenced by several factors: grating free area, sump capacity, body free area, design of the gully, outlet size, and features and accessories such as filter buckets and traps.

Experience shows that at low heads of water the flow rate of a gully is mainly governed by the grating free area; at heads of water above 50mm flow rate is governed by the body free area, or by the grating free area, whichever is smaller. This catalogue shows free area (cm^2) for gratings and bodies.

FLOOR AND FLOORING

The depth of the structural slab and available space will influence the selection of gullies, while the use of an extension may be necessary to bring the grating or cover up to finished floor level.

Installations with a damp-proof membrane will require the use of gullies with a membrane clamping collar.

Different kinds of floor finishes such as ceramic tiles or sheet floor covering, such as vinyl, will influence the type of grating or cover to be used.

PIPEWORK

The type and size of pipework in a given installation is fundamental to the selection of gullies. Wade gullies can be connected to all pipework in general use; certain bodies are for direct connection to pipework, others require the use of spigot adaptors and/or couplings.

APPEARANCE

Gullies with attractive gratings or covers made of nickel bronze, polished bronze or stainless steel are for use in finished floor areas where the gratings or covers contribute to the aesthetic appeal of the area.

Sherardized cast iron gratings whilst of pleasing appearance are best suited in unfinished floors in plant rooms etc. and also for restoration or refurbishment projects to match period architecture.

ACCESSORIES AND VARIATIONS

Standard optional items are readily available, such as filter buckets to intercept debris, internal backwater valves to prevent backflow, and side inlets and tappings to receive ancillary pipework.

Custom made products can be manufactured for non-standard applications.

MATERIALS AND FINISHES

Strength, corrosion resistance and appearance are important considerations when selecting gullies.

Information on materials and finish of Wade floor gullies is given in Appendix i.