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**Roads and Bridges
Agrément Certificate
No 05/R139**

Designated by Government
to issue
European Technical
Approvals

OSMA ROAD GULLIES

Elément de canalisation
Abzugsgaben

Product



• THIS CERTIFICATE RELATES TO OSMA ROAD GULLIES.

• The products are for use as trapped or untrapped road gullies for direct connection to plastic pipe systems.

• The products are to be surrounded with concrete which must be in accordance with the requirements of Highways Agency acting on behalf of the Department for Transport; the Scottish Executive Development Department; the Welsh Assembly Government; and the Department for Regional Development, Northern Ireland.

Highways Agency Requirements

1 Requirement

The requirements for road gullies are set out in the Manual of Contract Documents for Highway Works (MCHW Volumes 1 and 2 and Volume 3, Drawing No F13).

Regulations

2 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section:

12 Procedure (12.1) of this Certificate.

Technical Specification

3 Description

3.1 Osma Road Gullies are manufactured with two types of outlet, each in two depths (see Table 1), and comprise a blow-moulded, high-density polyethylene (HDPE) body with a nominal outside diameter of 500/450 mm (see Figure 1). The gullies incorporate an integral trap, outlet spigot or socket connection and a rubber access plug with an integral retaining strap (see Figure 2). If the access plug is not used, the gully can be considered untrapped.

Table 1 Osma Road Gullies

Code No	Overall size (mm)		Outlet type
	nominal diameter	depth	
6TW651	500/450	760	TwinWall spigot
6TW650	500/450	910	TwinWall spigot
6UR590	500/450	760	UltraRib socket
6UR600	500/450	910	UltraRib socket

Figure 1 Gully details

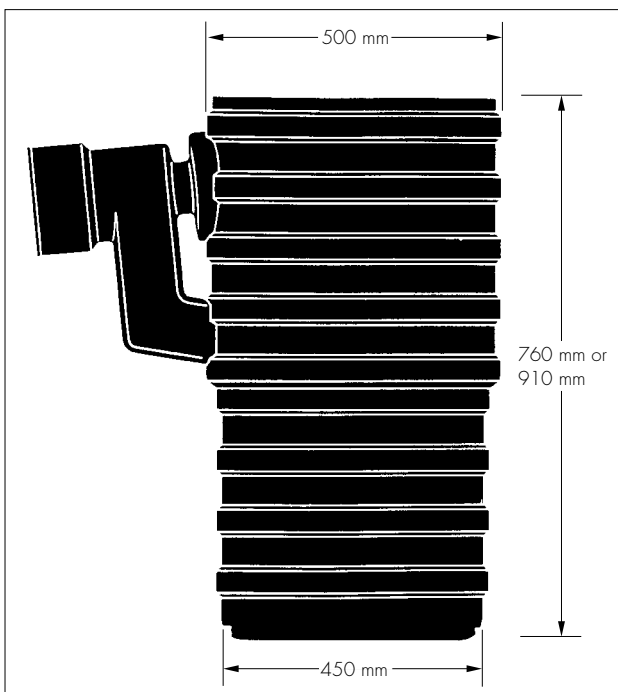
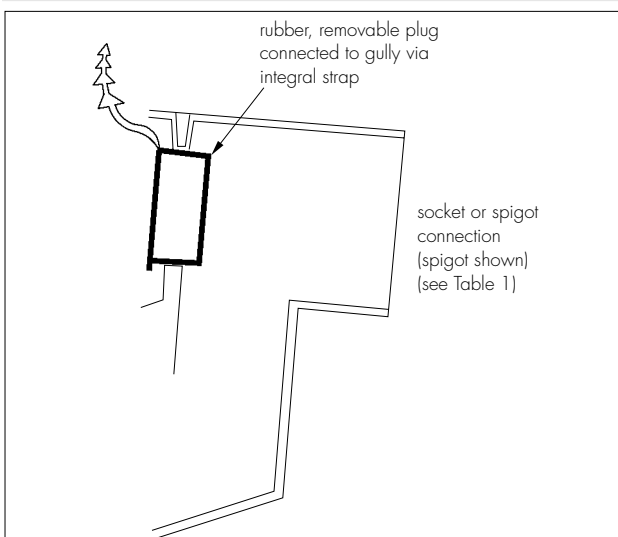


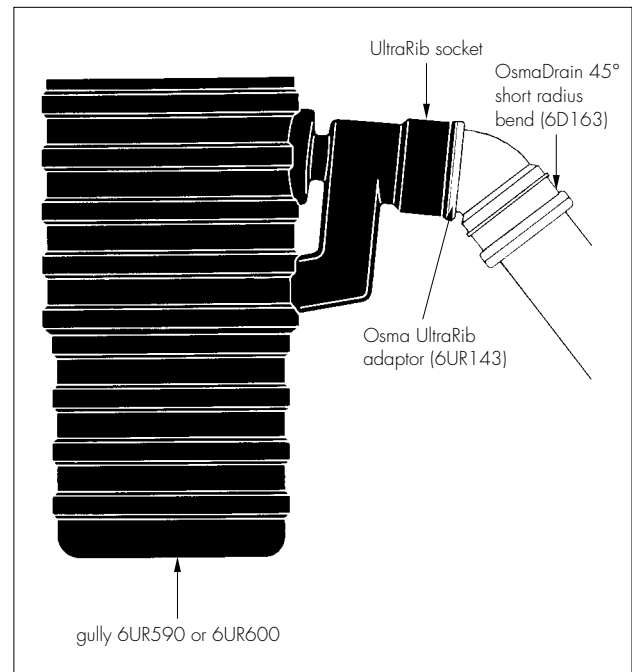
Figure 2 Trap detail



3.2 The outlet is suitable for connection to 150 mm Osma UltraRib and TwinWall pipe.

3.3 Connection of the 6UR590 and 6UR600 gullies to 160 mm PVC-U pipe (Kitemarked to BS EN 1401-1 : 1998) can be made using the Osma UltraRib adaptor (6UR143) (see Figure 3).

Figure 3 Connection to BS EN 1401-1 pipe



3.4 Quality control includes visual examinations on each moulding and checks on dimensions and weight.

4 Delivery to site, handling and storage

The gullies are delivered to site wrapped in polythene on pallets and are each identified by the manufacturer's product code and the number of this Certificate.

Design Data

5 General

Osma Road Gullies are satisfactory for use when surrounded with a minimum thickness of 150 mm of concrete to the specification required by the Highways Agency (HA).

6 Flow characteristics

6.1 The gullies have flow characteristics equivalent to those of precast concrete units to BS 5911-4 : 2002 and BS EN 1917 : 2002.

6.2 The gullies have a holding capacity of:

- 6TW651 — 86 litres
- 6UR590 — 86 litres
- 6TW650 — 104 litres
- 6UR600 — 104 litres

7 Strength and stability

7.1 The gullies have adequate strength to withstand the loads associated with placing the concrete.

7.2 The gullies have adequate resistance to impacts likely to be encountered during transport, installation and emptying.

8 Watertightness

8.1 The connections between the gullies and the pipes specified in this Certificate, when installed as shown in Drawing No F13 of the *Highway Construction Details*, and, when surrounded by concrete to the HA specification, are fully watertight in accordance with the MCHW, Volume 1, Clause 504.3.

9 Rodding and maintenance

9.1 The drain from each gully may be rodded using conventional flexible drain rods by removing the rubber plug (see Figure 2). In common with other standard plastics drainage systems, toothed root cutters and rods with metal ferrules used in some mechanical cleaning systems could damage the gully and should not be used. To maintain the effectiveness of the trap, the plug must be replaced after rodding.

9.2 Each gully is emptied using conventional suction tankers.

10 Practicability of installation

Gullies are installed easily under normal site conditions.

11 Durability

When surrounded by concrete and installed in accordance with this Certificate, each gully will have a life equivalent to that of the UltraRib and TwinWall systems.

Installation

12 Procedure

12.1 Each gully should be installed in a suitably sized pit, allowing for a minimum surround and base of 150 mm of concrete to the HA specification and any trench shoring required.

12.2 A concrete base at least 150 mm thick is laid. The gully should be set level and in line with the branched drain, and haunched with concrete up to its second rib.

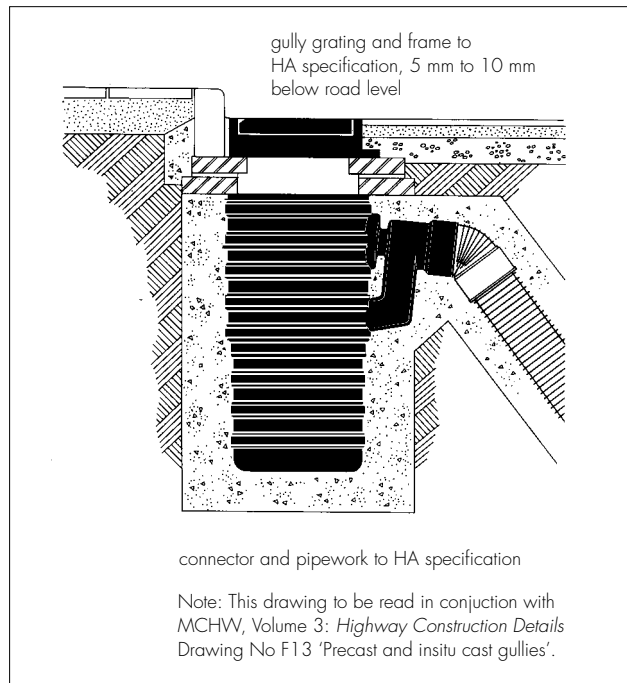
12.3 The trapped or untrapped gully is connected to the branch drain in accordance with normal UltraRib or TwinWall⁽¹⁾ practice, as appropriate.

(1) A ring seal is not required for TwinWall connections.

12.4 The gully is surrounded, up to the lip, with a minimum of 150 mm of concrete (see Figure 4). To prevent distortion and flutations, the gully should be weighted by filling with water or suitable ballast prior to placing the concrete. The concrete must be evenly distributed and must fully surround the outlet spigot/socket and connection joint; the use of a vibrating poker will assist compaction and reduce void formation.

12.5 Installation is completed by the construction of a suitable support for the gully grating and frame, as shown in the MCHW, Volume 3 : *Highway Construction Details*, Drawing No F13.

Figure 4 Typical installation details



Technical Investigations

The following is a summary of the technical investigations carried out on Osma Road Gullies.

13 Investigations

13.1 The manufacturing and assembly processes were examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

13.2 Tests were carried out to determine:

- watertightness of joints
- resistance to external pressure, equivalent to that of wet concrete
- capacity
- dimensional accuracy
- melt flow rate to BS 2782-7.720A : 1979
- density to ISO 1183 : 1987, Method A.

13.3 An assessment was made based on existing data relating to:

- resistance to chemicals
- environmental stress cracking resistance
- flow capacity
- durability
- impact resistance
- practicability of installation
- ease of handling
- ease of rodding.

13.4 Visits were made to sites in progress to assess the practicability and ease of handling, and installation on site was assessed.

Bibliography

BS 2782-7.720A : 1997 *Methods of testing plastics — Rheological properties — Determination of the melt mass-flow rate (MRF) and the melt volume-flow rate (MVR) of thermoplastics*

BS 5911-4 : 2002 *Precast concrete pipes, fittings and ancillary products — Specification for unreinforced and reinforced concrete inspection chambers (complementary to BS EN 1917 : 2002)*

BS EN 1401-1 : 1998 *Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinylchloride) (PVC-U) — Specifications for pipes, fittings and the system*

BS EN 1917 : 2002 *Concrete manholes and inspection chambers, unreinforced, steel fibre and reinforced*

ISO 1183 : 1987 *Methods for determining the density and relative density of non-cellular plastics*

Manual of Contract Documents for Highway Works, Volume 1 *Specification for Highway Works*, August 1998 (as amended)

Manual of Contract Documents for Highway Works, Volume 2 *Notes for Guidance on the Specification for Highway Works*, August 1998 (as amended)

Manual of Contract Documents for Highway Works, Volume 3 *Highway Construction Details*, March 1998 (as amended)

Conditions of Certification

14 Conditions

14.1 This Certificate:

- relates only to the product that is named, described, installed, used and maintained as set out in this Certificate;
- is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- is valid only within the UK;
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- is copyright of the BBA;
- is subject to English law.

14.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

14.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabrication including all related and relevant processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine;
- are reviewed by the BBA as and when it considers appropriate; and
- remain in accordance with the requirements of the Highways Agency.

14.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product;
- the right of the Certificate holder to market, supply, install or maintain the product; and
- the actual works in which the product is installed, used and maintained, including the nature, design, methods and workmanship of such works.

14.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.



In the opinion of the British Board of Agrément, Osma Road Gullies are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 05/R139 is accordingly awarded to Wavin Plastics Ltd.

On behalf of the British Board of Agrément

Date of issue: 30th March 2005

Chief Executive