

ACO Water Management: Civils + Infrastructure

ACO SuDS Swale Inlet



ACO SuDS Swale Inlet

Technical data



Introduction to ACO SuDS Swale Inlet

The ACO SuDS Swale Inlet unit provides an aesthetically pleasing solution when linking proprietary conveyance drainage systems to vegetated infiltration features such as swales, basins, ponds and water courses.

Aesthetically pleasing SuDS interface

In comparison to traditional in-situ structures and concrete headwalls, the low profile unit provides a natural looking interface between proprietary and vegetated drainage solutions, complementing the surrounding environment.

The consistent product appearance makes the product ideal for phased or retrofit installation, and the 1 in 3 gradient profile can be used to help construct swales to satisfy the CIRIA C697 guidance (Design Criteria for Swales).

Erosion protection

The surface finish and the flared outlet of the unit encourages water dispersion and reduces excessive flow velocities - helping to protect the surrounding environment from erosion and meeting the flow rate guidance in CIRIA C697. The ACO SuDS Swale Inlet will reduce the velocity and distribute the flow across a footprint up to 6 times that of a traditionally constructed pipe outfall.

As part of a system to manage the flow rate and volume of surface water run-off, the ACO SuDS Swale Inlet reduces the risk of localised flooding and eases pressure on the drainage network.

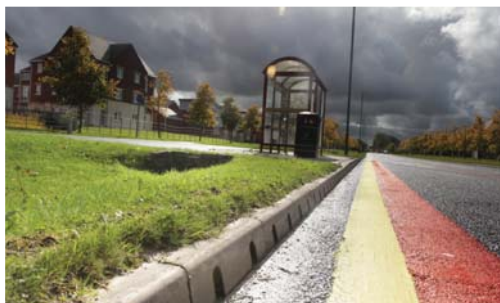
Shallow surface water conveyance

The ACO SuDS Swale Inlet can be integrated into any SuDS drainage scheme where there is a requirement to manage water on or near the surface, helping to manage surface water at its source.

Simplified installation

The one piece unit is placed into position and can be installed using concrete bedding or, alternatively secured with spiral ground anchors.

No additional on-site shuttering or formwork is required, removing the need to return to site and ensuring the final stages of a project can be concluded quickly and without hassle.



The ACO SuDS Swale Inlet is manufactured from Vienite®, ACO's high strength sustainable material which offers greater durability when compared to traditional materials and structures which are likely to deteriorate in service. The properties of the material allow virtually no water absorption giving protection against frost and freeze-thaw cycles, thus maintaining the long term performance of the unit.

ACO SuDS Swale Inlet is available as standard in three colours to suit project requirements: natural, grey and black.

An optional textured finished can also be applied to the unit if required.

When installed in applications that require a greater degree of protection such as schools or playing fields, an optional stainless steel grating can be applied to the upper inlet area to protect pedestrians and maintenance equipment.

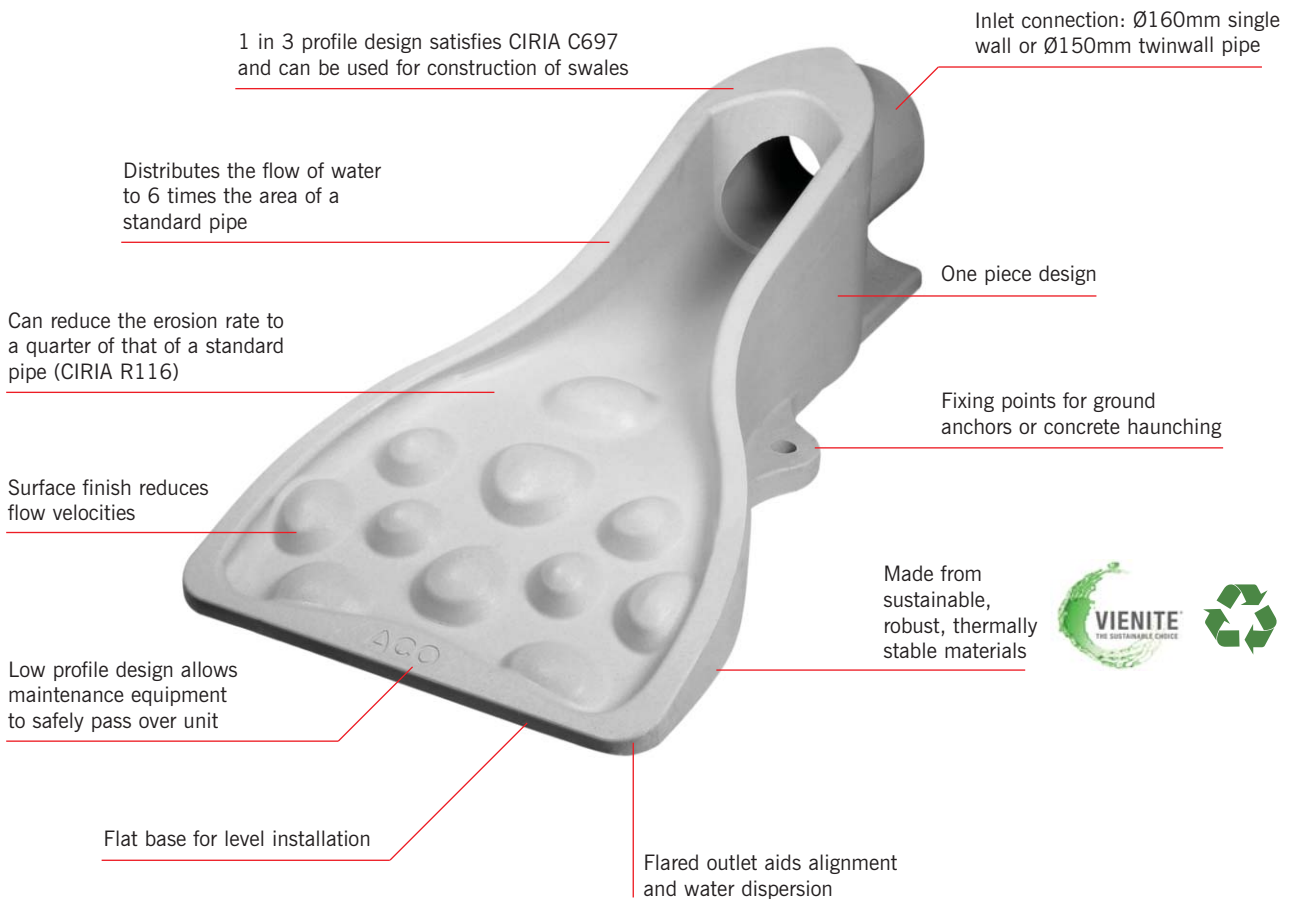
The ACO SuDS Swale Inlet simplifies inspection, with easier identification of blockages, and maintenance procedures are straightforward due to the simplified, consistent design of the outlet.



Why choose ACO SuDS Swale Inlet?

- ▶ Aesthetically pleasing interface between proprietary and vegetated drainage features
- ▶ Consistent appearance complements surrounding environment
- ▶ Helps protect local area from erosion
- ▶ Reduces excessive velocities and encourages water dispersion
- ▶ Complies with flow rate guidance in CIRIA C697
- ▶ Reduces the risk of localised flooding and pressure on the drainage network
- ▶ Cost effective alternative to traditional in-situ structures and pre cast concrete headwalls
- ▶ Offers durable, long term performance
- ▶ Simplifies installation and removes unnecessary costs
- ▶ Straightforward inspection and maintenance

Features overview



Technical data

Colour options



Grey

Natural

Black

Optional extras

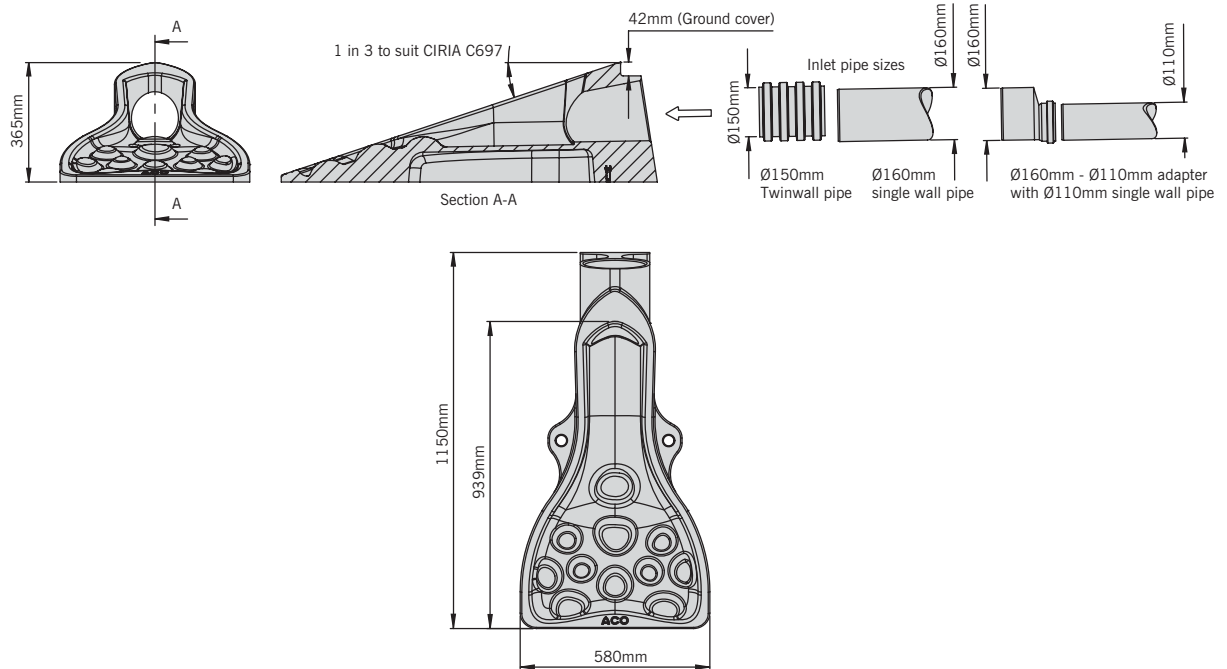
An optional textured finish and stainless steel grating is available.

Picture shows textured finished applied to black ACO SuDS Swale Inlet



ACO SuDS Swale Inlet

Product code	Description	Length (mm)	Width overall (mm)	Depth (mm)	Weight (kg)
27112	ACO SuDS Swale Inlet - Grey	1150	580	365	76
27111	ACO SuDS Swale Inlet - Natural	1150	580	365	76
27113	ACO SuDS Swale Inlet - Black	1150	580	365	76
27121	Grating kit*	-	-	-	0.2
27127	Anchor Kit ⁺	-	-	-	0.8

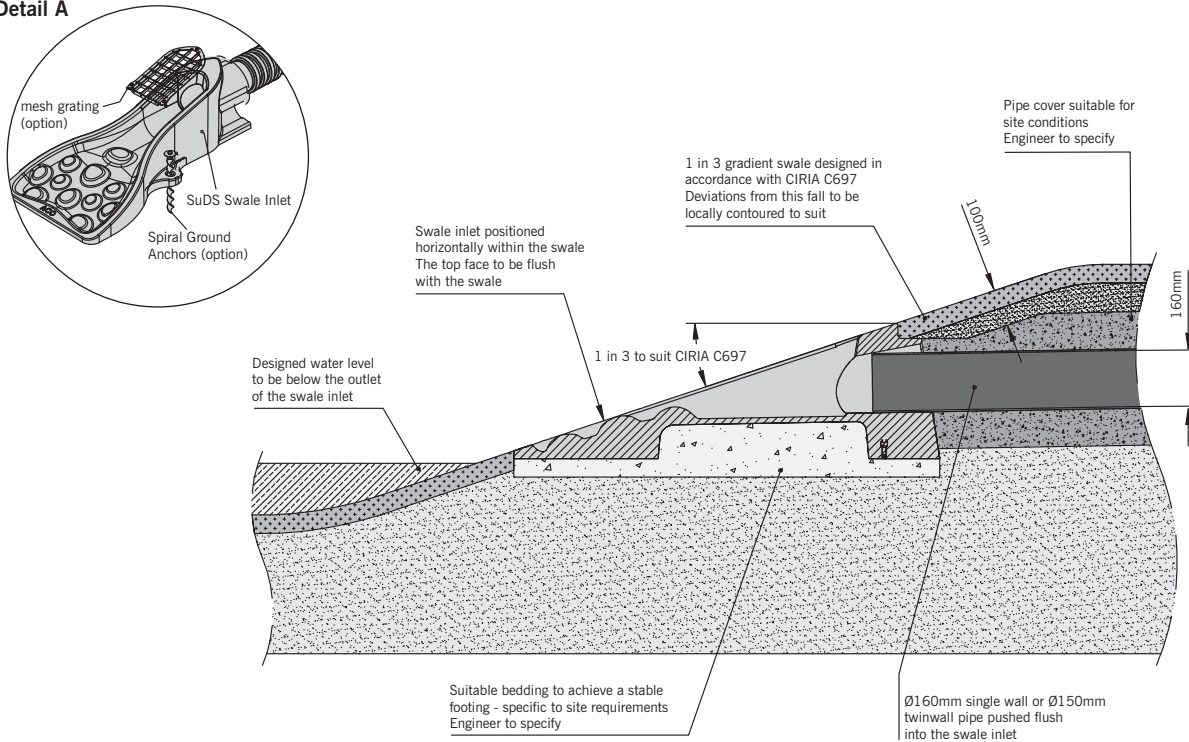


*Grating kit contains 1 x Grade 304 Stainless Steel mesh grating (mesh size is 42mm), 3 x anchors, 3 x washers and 3 x fixing screws
 + Ground Anchor kit contains 2 x ground anchors, 2 x washers and 2 x bolts



Installation detail

Detail A



1.0 Ground conditions:

The Customer should ensure that the ground conditions are suitable for the proposed installation detail. Engineering advice may be necessary.

2.0 Watertight joints:

Where a secure watertight joint is required between the pipework and the SuDS Swale Inlet unit, a suitable proprietary sealant should be used.

3.0 Surface protection

The installer should ensure that the adjacent ground level is higher than the SuDS Swale Inlet unit to avoid damage to the unit during installation or mowing activities.

4.0 Optional mesh grating and ground anchors

These are available for retrofit and typical installations. The anchors are installed by knocking them into the ground through the holes in the units; see detail A.

5.0 Handling

Please ensure suitable safe lifting techniques are used when positioning and installing the unit.



Shallow surface water conveyance

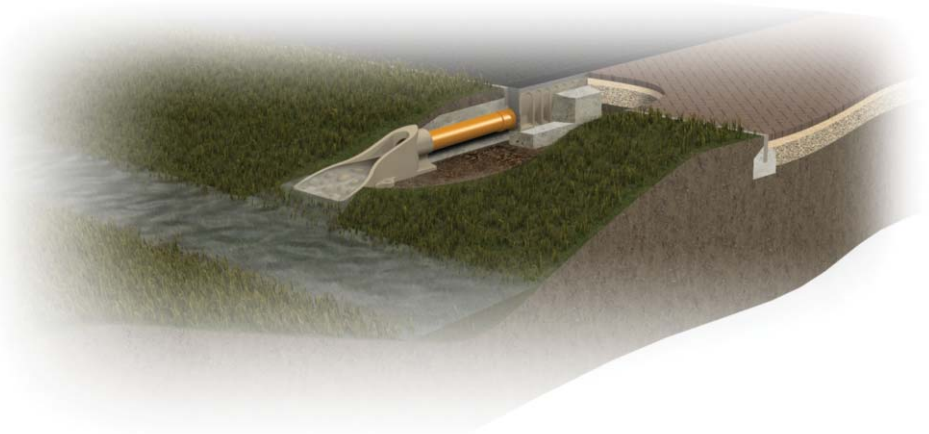
The ACO SuDS Swale Inlet can be integrated into any SuDS drainage scheme where there is a requirement to manage water on or near the surface. Managing surface water at the source allied with shallow surface water conveyance can help to reduce the risk of flooding and alleviate pressure on the drainage network.

The ACO SuDS Swale Inlet unit provides an aesthetically pleasing solution when linking proprietary conveyance drainage systems to vegetated infiltration features such as swales, basins, ponds and water courses. This combined solution encourages plant growth and provides increased amenity and biodiversity to the surrounding environment.

Depending on the application, ACO manufactures a wide range of surface water drainage systems which can simply be connected to the ACO SuDS Swale Inlet. The images below demonstrate how ACO surface water conveyance systems can be applied to landscaped and highway applications.

Landscaped environment

ACO MultiDrain™ MD connected to an ACO SuDS Swale Inlet to provide surface water conveyance.



Highway environment

ACO KerbDrain® connected to an ACO SuDS Swale Inlet to provide surface water conveyance.



MODEL SPECIFICATION CLAUSE

The swale inlet shall be ACO SuDS Swale Inlet as supplied by ACO Technologies plc. All materials and components within the scope of the system shall be supplied by this manufacturer.

The ACO SuDS Swale Inlet units shall be 1150mm (L) x 580mm (W) x 365mm (D) with a 1 in 3 gradient profile in accordance with CIRIA C697 (Design Criteria for Swales). The ACO SuDS Swale Inlet Unit shall be of one piece construction of Grey/Natural/Black coloured Vienite®. Vienite is a polymeric based recycled material, which contains post-consumer waste previously destined for landfill in the UK.

The units shall be installed with the manufacturer's grating and ground anchor kits as required for the scheme. The ACO SuDS Swale Inlet system shall be installed in accordance with the manufacturer's printed recommendations, and the works carried out as specified on drawings (*) and in accordance with recognised good practice.

† Please delete as applicable.

*Please insert drawing number relevant to the project.

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A division of ACO Technologies plc, ACO Business Park, Hitchin Road, Shefford, Bedfordshire SG17 5TE
Tel: 01462 816666 Fax: 01462 815895
e-mail: technologies@aco.co.uk website: www.aco.co.uk