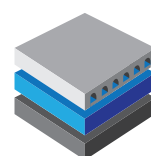


# DRIDECK

Sub Surface Channel  
Bridge Drainage System  
Fully Compliant To  
HA BA 26/94



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**PDS**

SURFACE WATER MANAGEMENT

# SUB SURFACE DRAINAGE ON BRIDGE DECKS IS AN ESSENTIAL PART OF ANY DESIGN

PDS are the market leaders in the design, manufacture and supply of Combined Kerb Bridge Drainage Systems. Our Envirodeck kerb units provide effective surface water drainage and sub surface water collection to the asphalt layers.

Lateral drainage slots in kerb systems do provide relief to the pumping action of wheel loads within the asphalt construction, but all kerb systems are limited in their ability to drain at deck level, This is due to a base thickness of the unit and the mortar bed which can raise the sub surface collection holes further from the deck.

Kerb units are usually laid directly on top of the RSA protection or regulating course. This raises the sub surface slots on the deck units a further 20mm (approx) from the deck.

A secondary system is therefore desirable to pick up any sub surface water at this lower level.

## INTRODUCTION

The Dri-deck drainage unit provides sub surface collection at two levels.

Water is collected immediately above the waterproofing membrane and also from any bituminous protection such as Red Sand Asphalt or regulating course.

The Dri-deck channel provides continuous sub surface water collection along kerb lines and/or can be placed transversely along the deck.

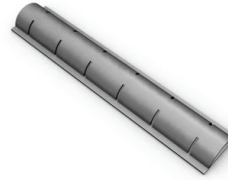
T pieces, bends and cross sections allow a number of drainage designs.

## THE SYSTEM

Dri-deck channel units 1mtr in length have a number of slots along the length for high water collection, the channels are bonded to the waterproofing using Dri-deck bedding compound. Tee Sections, Bends, Cross pieces and Outlets complete the system and each component is available in two sizes; regular (45mm) and slim-line (25mm).

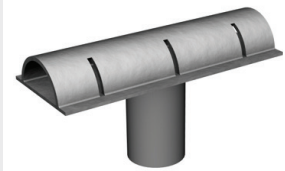
Manufactured in spheroidal graphite iron they are extremely robust and able to withstand the point loadings placed by tarmac rollers. They are also highly resistant to road salts.

Fig 1



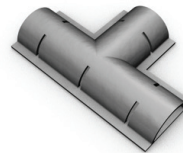
DDC

1mtr Linear Section



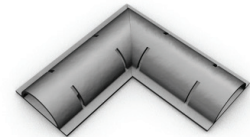
DDCO

Outlet Section



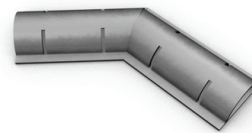
DDCT

Tee Section



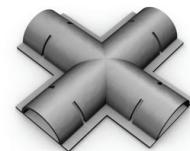
DDCB90

90 Degree Angle



DDCB45

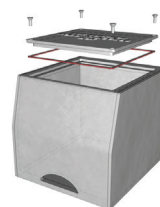
45 Degree Angle



DDCX

Cross Section

Angled Tees and Cross pieces allow numerous channel designs to optimise subsurface water collection.



DDRA - HB or 45 Splay

Rodding Access Unit  
(Height Adjustable)

Access to the system for cleaning / maintenance can be achieved by strategic placement of the kerblines rodding access **unit. Ref DDRA**. In instances where a CKD system is in place, a bespoke flush version is available.

## Expansion Joints



The base (D6101) unit is recessed to provide a seating for the cover unit and incorporates a flared edge for a smooth transition and termination of the waterproofing membrane.

The unique convoluted cover units are formed from a high strength and resilient thermoplastic material which is heat resistant and proven to resist deformation under surfacing compaction. Inlet holes at the top and bottom of the cover unit allow drainage from above and below the waterproofing protective layer.

The system is supplied with a range of compatible pipework which makes both economic and easy to use.

The 57mm High standard cover unit is suitable for a minimum surfacing depth of 75mm. A special 42mm low profile cover unit is available for shallower depths. All other components are listed.

## INSTALLATION OF THE DRI-DECK SYSTEM

### Dri-deck Outlets

The base unit is cast in-situ during the deck concreting operation for new works construction or alternatively is set into a core-drilled recess in the deck during refurbishment or maintenance work.

The waterproofing membrane is then laid and lapped over the flared edge of the base unit. A temporary blanking plug is placed into the base unit, allowing unimpeded machine laying of the protective layer.

Finally the plug is removed and the cover unit located prior to completion of the surfacing. For detailed information, please refer to Outlet Components Specification section.

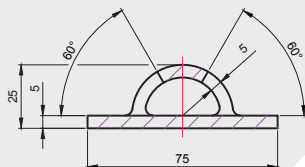
### Dri-deck Channels

These should be located along kerb lines and/or transversely across the deck close to any expansion joints and bonded directly onto the waterproofing using Dri-deck Fixing Compound.

Care should be taken with the bedding material so no voids exist between the channel flange and the deck. where there are outlets, the fittings are fixed into position and the RSA or regulating course is then laid.

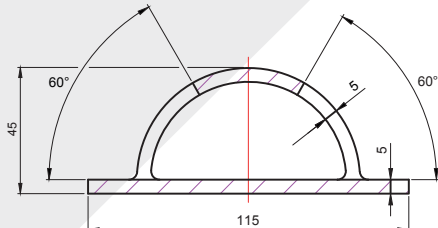
### Dri-deck Slim-Line

Cross section



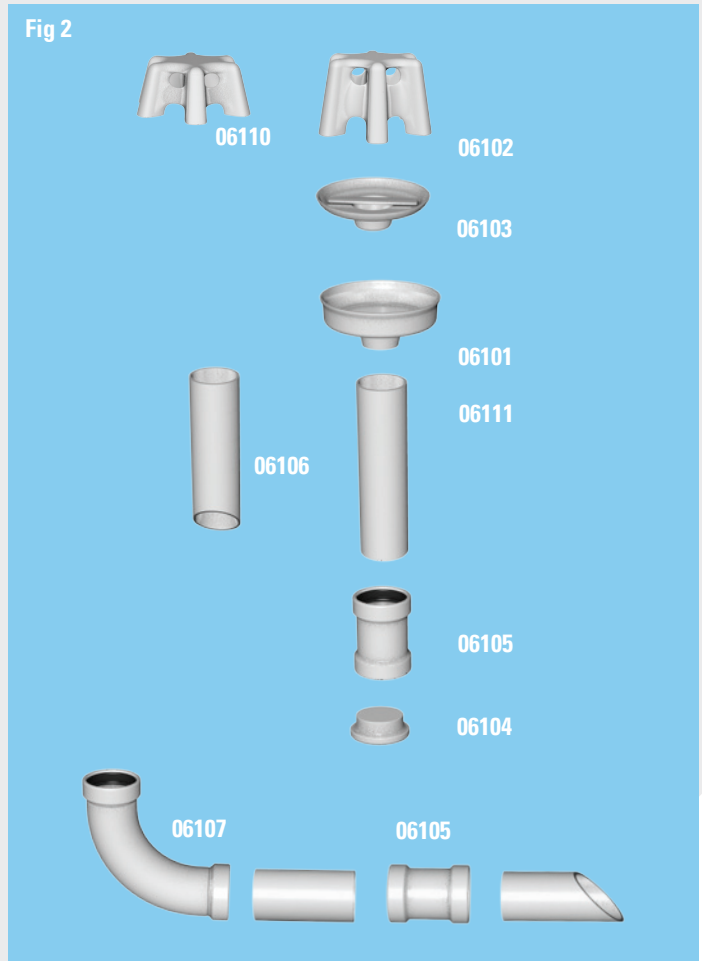
### Dri-deck

Cross section



## OUTLET SPECIFICATION

Fig 2



Stock No	Description	Stock No	Description
06101	Base Units Cover Unit (Standard Profile)	06106	Drip Pipe
06102		06107	90° Bend
06103	Blanking Plug	06108	45° Bend
06104	Soffit Unit	06110	Cover Unit (Low Profile)
06105	Pipe Connector	06111	1m Polyethylene Pipe

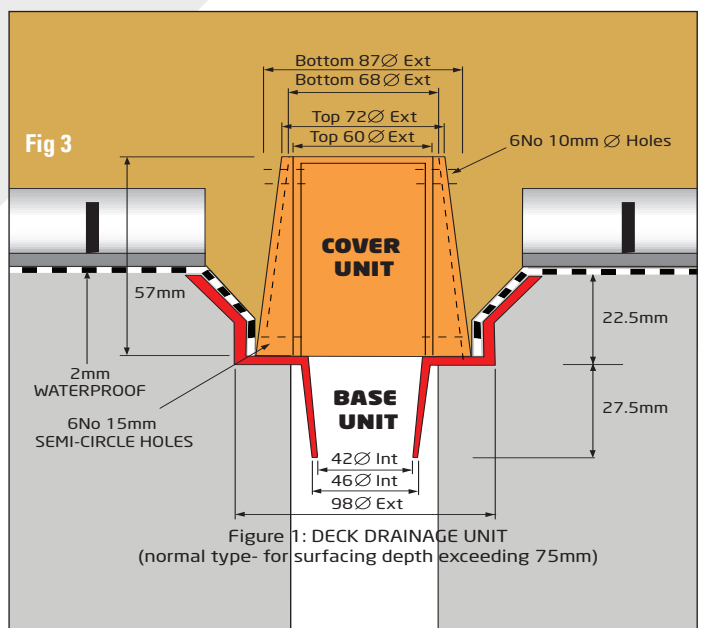
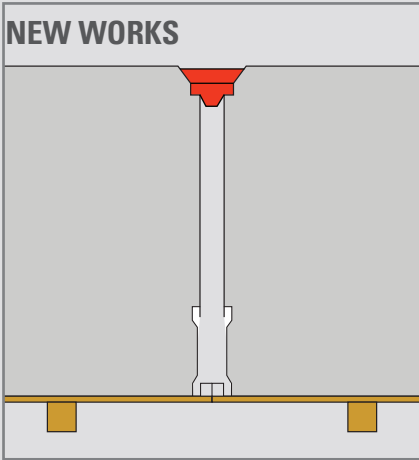


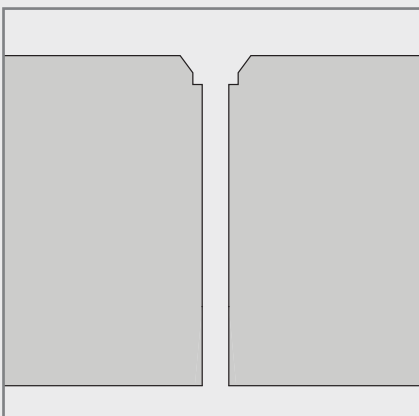
Figure 1: DECK DRAINAGE UNIT (normal type- for surfacing depth exceeding 75mm)

# DRI-DECK OUTLETS INSTALLATION DETAIL

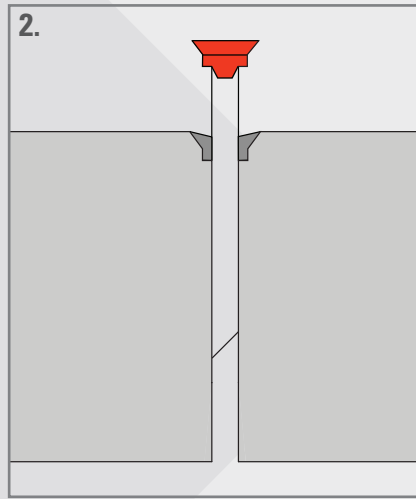


1. Nail the soffit unit at the required drain position. Place the pipe connector over the soffit unit and set the base unit to the required deck level.
2. Close off the pipework using the blanking plug or by another suitable means before concreting the deck.
3. Remove plug immediately after concreting, clean and replace to prevent debris and detritus from blocking the outfall.
4. Refer to steps 4 -7 in the refurbishment section.

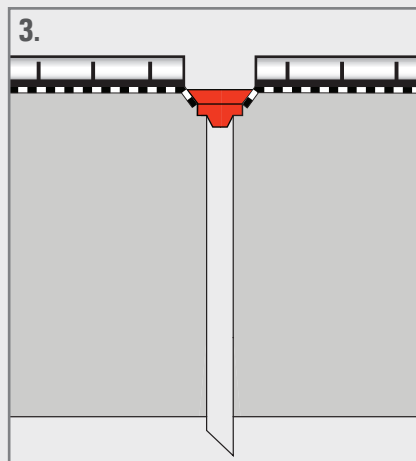
## 1. REFURBISHMENT SCHEME



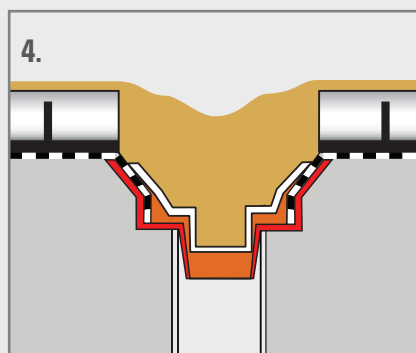
Core drill at selected positions a hole of 60mm minimum diameter through the deck. Concentrically drill a larger hole of 140mm min. Dia. to a depth of 30mm min.



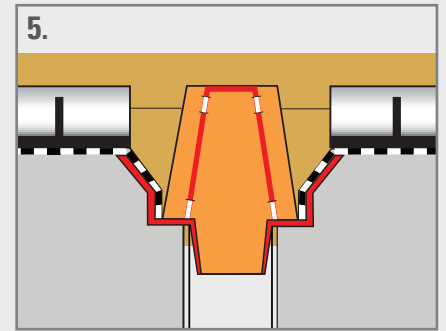
Assemble the base unit onto selected outfall pipe. Ensuring recess is clean and dry set the drainage components into position with suitable repair mortar, trowelling flush with the deck and allow to cure.



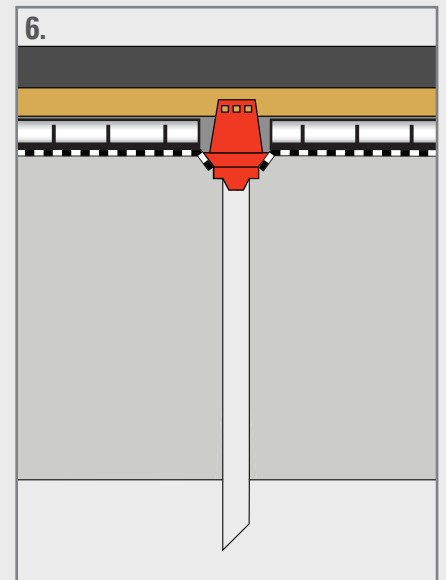
Ensuring the base unit is clean and dry, lay the waterproof membrane. Dri-deck channels are then fixed in accordance with the design layout.



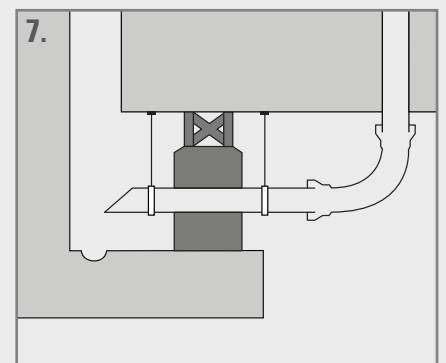
Insert the blanking plug unit and lay the sand asphalt or regulating course as specified. Whilst the surfacing is still warm, carefully remove the plug and the collected surfacing.



Insert the cover unit immediately prior to laying the base course material. Hand lay and bed in the cover unit in base course material prior to laying the actual base course.



Complete the surfacing.



The outfall may be collected and discharged positively into a suitable storm water system, or into the drainage pipework from the Envirodeck combined kerb drainage system.



SURFACE WATER MANAGEMENT

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