

Press Release: November 2020

## **Tunnel builders benefit from TechPlas innovation**

TechPlas Extrusions has been solving problems for companies for over 30 years. Our expertise and ingenuity have helped create countless products that have saved our customers time and money by using the unique properties of PVC to develop with better solutions. The most recent example of this has been utilised at the Forrestfield-Airport Link rail tunnel project in Perth. This is a major infrastructure project valued at \$1.86 billion jointly funded by the Australian and West Australian governments and built by the Salini Impregilo – NRW Joint Venture. When completed in late 2021 this underground link will deliver world class public transport to Perth's eastern suburbs.

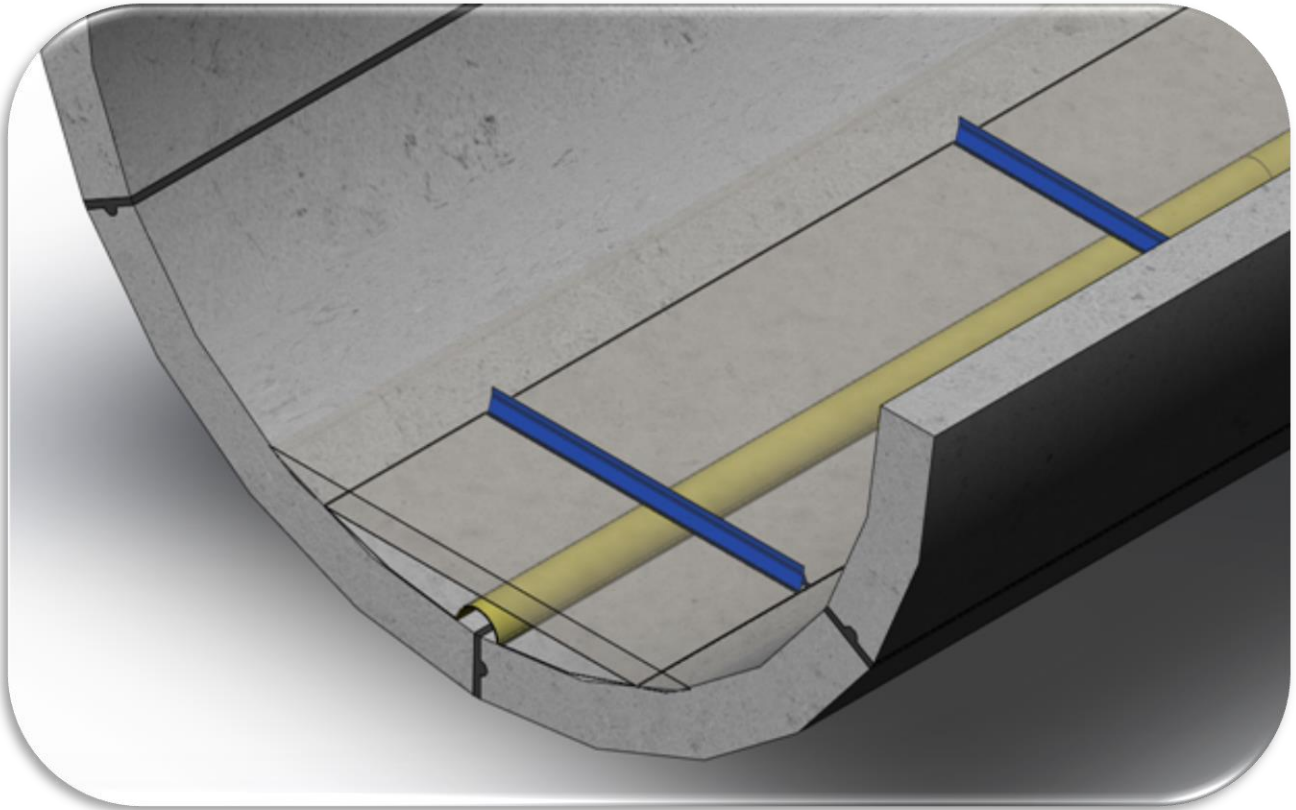
TechPlas products have been used in a number of specific applications where a bespoke solution was required. The light-weight inverted drain (shown below) was cast into the first layer of concrete on the segment floor and is an integral part of the drainage system. This novel solution forms an important part of tunnel infrastructure and is significantly cheaper and easier to install than traditional pre-cast concrete alternatives. Water can enter the tunnels by various means including cleaning and during wet weather where trains bring water into the tunnels. The drainage system is designed to guide water to low points at the base of the tunnels through the TechPlas inverted drain. Once the water reaches a certain level it will pass to drainage basins installed in some of the cross passages. The inverted drain was developed with TechPlas' R&D team as a customised profile to meet the particular needs of this project.

According to Mark Pettit, General Manager at TechPlas, the requirements of the drain meant that the profile needed to be quite large and these are never easy to extrude – especially long sections as required on this project. “What’s more, due to budget constraints and a desire on the part of the client to minimise environmental impact, we also decided to make the product from 100% recycled material which adds to the complexity of the manufacturing process.”

“Fortunately, TechPlas has a lot of experience manufacturing products from recycled PVC and we have good quality sources for waste material. Our production team did a great job refining the process and our quality control is something we pride ourselves on.”

TechPlas also supplied specially designed PVC ground crack inducers for this project. These were cast into the concrete at the base of the rail tracks and made to a height of 140mm – much taller than standard crack inducers. TechPlas has met the demanding schedule for supply of many kilometres of product to ensure that the project timeline was maintained. The two products used have diverted over 150T of PVC materials from waste streams. We are proud to be part of another iconic Australian infrastructure project and to have worked with such professional partners.

For more information on how TechPlas can help you solve problems for you contact us on (02) 9636 6755 or [enquiries@techplas.com.au](mailto:enquiries@techplas.com.au)



The inverted drain is shown in yellow and the crack inducers are shown in blue. Each was cast in concrete at separate stages of construction.



The inverted drain sits on the concrete floor segments of each of the 8km long tunnels.



The crack inducer seen in blue were spaced out, one per every five concrete sleeper. The product's profile is shown below.

