



## Client

Keystone Civil

## Installation

February  
- March 2025

## Location

Geelong

## Product

Iplex BlackMax  
DN225 - DN750

# Engineering Excellence: The use of BlackMax pipes in Geelong

Keystone Civil, a contractor based in Geelong, requested DN750 BlackMax pipes to address several onsite installation challenges. BlackMax was selected for its lightweight properties, high stiffness and long lengths, making it safer and more efficient to install, and delivering durable and quality outcomes.

The project required innovative solutions to navigate challenging site conditions and varying pipe depths and an existing live fire mains near the drainage alignment.

## Challenges

- **Site Constraints:** The presence of a live fire main near the drainage alignment required careful handling of the pipes during installation.
- **Pipe Depth Variation:** Varying depths called for lightweight pipes for easier maneuverability in between trench shields and around existing services.
- **Project Risks:** The flat pipe grades (0.33%) and depths required high stiffness and smooth wall pipes for hydraulic and structural performance in deep trenching.

## Solution

Keystone Civil chose DN750 BlackMax due to its lightweight nature and smooth walls, making it easier to handle with existing services. The 6m lengths reduced the number of joints in the trench, streamlining installation and minimising safety risks.

The project team appreciated the assembly process noting the BlackMax pipes were robust and maintained their stability during installation with crushed rock embedment.

They also noted:

- The design of the rubber ring seals minimised joint assembly errors, because of the rings symmetrical shape.
- The socket label instructions provided clear joint instructions. The pipe crew could easily identify the

jointing procedure from their past experiences with smaller BlackMax pipe sizes.

- The joints were easy to assemble, and the low jointing forces required minimal effort, compared to other competitor products.
- **Ease of Installation:** BlackMax pipes were easier to install to grade, thanks to their straight alignment.

## Outcome

Keystone Civil achieved high-quality results, with concrete headwalls terminating the pipes in swale drains. The pipe ends were grouted and flushed neatly with the face of the headwalls, ensuring a clean and aesthetic finish. The team reported satisfaction with the overall ease of installation and the performance of BlackMax pipes.

## Future Plans

The project is scheduled to resume at the end of March following some design adjustments. Additional product offerings, including DN900 and the upcoming DN1000 and DN1200, and were confirmed to meet their future project requirements.

## Conclusion

The use of BlackMax pipes proved to be a reliable and efficient solution for Keystone Civil, addressing complex site conditions and ensuring a robust stormwater drainage system.