



# CIVILS

Quality Plastic Solutions

## Case Study

### Attenuation Tank - MSCP Sealand, Heathrow

#### Project Outline

- MP Consulting based in Knaresborough secured a project to design a drainage system including an attenuation system for a multi storey car park located in Sealand, Heathrow. The consultant Mr. Richard Murray who had never worked closely with JFC in the past contacted us to help find an attenuation solution for the restricted footprint of the site.
- The drainage design model showed a required volume of between 50-63m<sup>3</sup> with very little external space to locate the attenuation system. Therefore the attenuation solution needed to be positioned under the footprint of the development.
- The contractor appointed for the project was Rockfield UK Ltd. Once the agreed specification for the project was completed and the design approved the order was placed through Drainfast one of JFC's trade partners based in the UK.
- Rockfield UK Ltd then developed a detailed installation programme and JFC were required to manufacture and deliver the attenuation solution to meet this program.

#### JFC Project Contribution

- Due to the confined size of the site, the attenuation system had to be located under the footprint of the development running between the column bases. This was achieved by running 3 parallel runs of 1050mm CorriPipe™ XL. JFC Technical department generated a detailed design drawing for the installation, with the final attenuation volume identified as 56.09m<sup>3</sup>.
- A number of consultations took place between Rockfield UK Ltd and JFC Civils resulting in a detailed installation programme being developed to effectively plan the project to meet the deadlines required.
- JFC also supplied a Bypass Interceptor which again was delivered on a specific date to meet the requirement of the installation brief.

#### Customised Fabricated Solutions:

##### Large Diameter Twinwall CorriPipe™ XL - Attenuation System application

JFC has further expanded its range of CorriPipe™ products with the introduction of 750mm, 900mm and 1050mm sizes. These sizes are manufactured using the most advanced extrusion and polymer processing technology available. Large diameter CorriPipe™ is manufactured from recycled HDPE utilising a twin extrusion process. The inner and outer layers are simultaneously extruded, one inside the other and heat welded together in one continuous process. The outer wall is corrugated providing excellent structural strength reducing the possibility of on-site damage. The inner wall has a smooth seamless finish to optimise hydraulic flow.

The application of JFC CorriPipe™ XL for the purpose of this project was for the construction of a custom fabricated attenuation system using JFC 1050Ø CorriPipe™ XL pipe.

*"JFC Civils division can design, develop and manufacture bespoke products tailored to customer specific requirements. Our blend of market knowledge and technical expertise allows us to deliver distinctive customer service from initial project specification through to project completion"*

- Paul Ansell JFC Civils Division UK



## Features & Benefits

### JFC CorriPipe™ XL

- Superior structural strength with SN2, SN4 and SN6 options available.
- Unique Integrated socketing system (traditional independent sockets also available)
- Smooth internal plastic bore with reduced hydraulic resistance. Manning's coefficient of 0.012 allows for greater flow capacity and also a greater factor of safety. This also reduces sediment or debris build-up when compared to concrete or steel.
- Lightweight when compared to traditional materials such as concrete or steel e.g. (Up to 90% lighter than concrete)
- Fully leak tested to HAPAS requirements when used with rubber seals.
- Standard 6m lengths make it quick and easy to install, eliminating wastage and reduces labour and plant costs. E.g. (Up to 6 times faster installation compared to concrete)
- Parallel corrugations allow pipe to be easily cut square on site as required. (Spiral wound pipe makes it very difficult to create a square cut on site if required).
- JFC CorriPipe™ is available unperforated, fully perforated, or half perforated.
- Manufactured from exceptionally durable HDPE material with excellent corrosion resistance and long term performance.
- Resistant to most naturally occurring chemical's and is therefore suitable for use on the majority of soil conditions.
- Can typically be installed with cover depths from 0.6 to 10m\*



### JFC CIVILS UK

JFC Plastics Ltd.  
25 Goodlass Road, Speke  
Liverpool L24 9HJ, United Kingdom

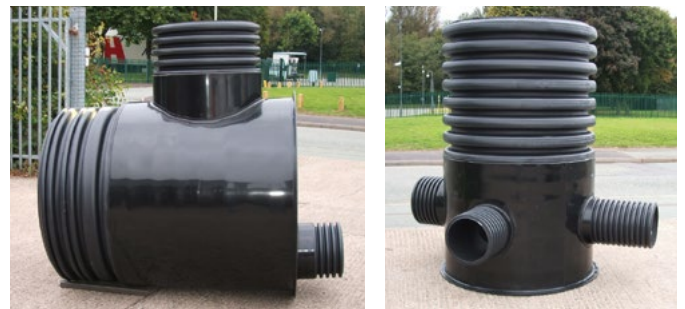
Tel. +44 1928 583 391  
Email. [infouk@jfccivils.com](mailto:infouk@jfccivils.com)

## ByPass Interceptor

JFC Civils also supplied and manufactured a custom built ByPass Interceptors for this project. ByPass interceptors remove pollutants from effluent and allow cleaner water to pass into a surface water drainage system. Interceptors work by allowing the pollutants and water to naturally separate, the pollutants float to the surface of the water and the silt settles within the unit for easy removal.

### ByPass Interceptor

- Used on low risk sites (Car Parks)
- Sized in litres per second flow
- Available in Class 1 format



## JFC Service Solution

- The biggest challenge faced by the contractor for this project was that the selected supplier should have the capability to supply a custom attenuation system that could be sited under the confined footprint of the development and within the agreed time frame to meet the project specification.
- This was an area where JFC excelled working closely with our distribution partner Drainfast and the contractor Rockfield UK Ltd. adopting a planned and organised approach for the manufacture and delivery of all components and working to an agreed installation program ensuring the project was delivered to the timescale involved.
- This also resulted in potential savings for the contractor who had a team of workers assigned for installation. Any delay in delivery to site would have resulted in unnecessary downtime and associated labour costs.
- All of the above culminated in the development a great working relationship with the site contractor and our own distributor partner involved in this project. The contractor was particularly impressed by the smooth running and professionalism of expertise and service delivered within the tight time constraints involved.