

# Kinver Case Study

**Project:** Kinver 24"Pipe Bridge Burst Watermain

**Location:** Situated on an island in the River Stour, to the rear of The Hyde, Kinver

**Duration:** 4 weeks

## Project aim

Excavate around the 24-inch water main to facilitate the installation of an encapsulation collar over the leaking joint, ensuring safe access, proper alignment, and effective sealing of the defect.



## Project highlights

- Utilised a Kaiser S8 spider excavator to access the remote site via a narrow dirt track, safely navigating challenging terrain and crossing the river by ascending and descending steep riverbanks.
- Successfully collaborated with specialist partner R2M, who designed and manufactured the bespoke 24-inch encapsulation collar, ensuring a precise and effective repair solution.
- Safely completed the repair of the burst 24-inch strategic water main, maintaining high standards of workmanship and site safety throughout.
- Carefully planned and executed the works to minimise disruption to local residents and protect the surrounding environment, ensuring a smooth and efficient project delivery.

## Project background

Doocey Group received a call from the Onsite team to attend and assess the safest and most effective method of accessing a burst on a 24-inch strategic water main.

The purpose of the visit was to evaluate the site conditions and determine a suitable approach that would enable secure excavation works and facilitate a controlled and efficient repair of the damaged section.





## Works undertaken

To facilitate safe site access and support the investigation and repair works, a temporary matted walkway was installed across an adjacent garden area. This created a stable and protected route for operatives to reach the island location via an otherwise narrow and restricted access point.

The matting system not only safeguarded the surrounding environment by preventing ground damage, but also ensured that personnel could safely access the work area to carry out initial inspections and planning activities. This enabled the team to assess the severity of the burst on the 24-inch strategic water main, identify risks, and determine the most appropriate method for undertaking the repair.

Establishing this safe access was a critical first step, allowing engineers to evaluate ground conditions and plan for the introduction of plant and machinery required for excavation. Ultimately, it supported the safe and efficient progression of works to expose the damaged section of the main and carry out the necessary repair to reinstate the integrity of the network.

## Site challenges

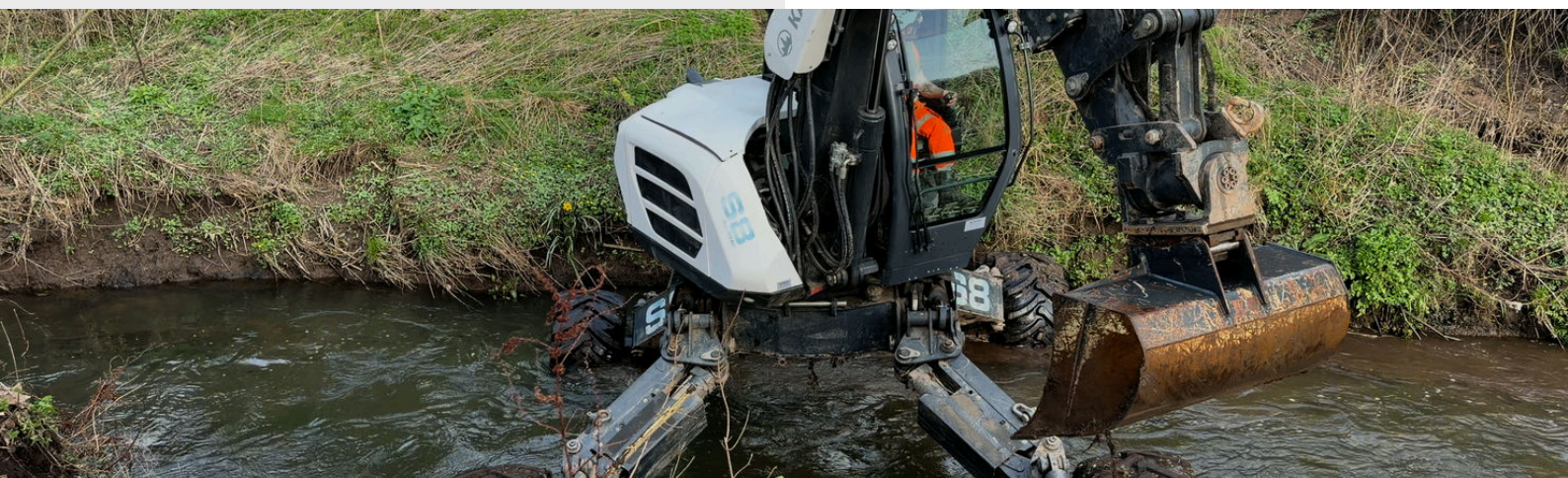
Several technical and logistical challenges were encountered:

- Gaining access to the 24" burst main proved difficult due to its location on an island in the centre of a river, with no direct access for machinery.
- Identifying suitable routes for heavy plant was challenging, as weight restrictions were in place on two bridges along the access lane.
- Extensive clearance of trees and dense vegetation was required to enable safe access to the affected main.

## Overcoming the challenges

The project team implemented a range of proactive measures to mitigate risk and maintain programme:

- A team of specialist tree surgeons was deployed to safely remove trees and dense vegetation, creating a suitable access route for excavation works.
- Access for machinery was carefully planned and agreed via a local leisure centre car park located approximately 300 metres from the burst location, utilising an existing dirt track running adjacent to the river.
- A specialist contractor supplying Kaiser S8 Spider excavators was engaged, attending site to assess and confirm a safe method of navigating the dirt track and traversing the river by negotiating the steep banks on either side.



## Benefits & sustainability

- Significant time and cost savings were achieved by eliminating the need to install a temporary bridge across the river.
- Avoidance of constructing a haul road for crane access further reduced programme duration, site disruption, and overall project costs.
- The solution removed the requirement for a PortaDam system within the river, minimising environmental impact and reducing risks associated with in-water works.
- By utilising innovative access methods and specialist equipment, the project significantly reduced its physical footprint, preserving the surrounding natural environment and improving overall sustainability outcomes.

## Outcome

The project was completed safely and efficiently, overcoming challenging site conditions without the need for major temporary works. The innovative approach reduced costs, minimised environmental impact, and ensured a successful repair within a shortened timeframe.



## Client testimonial

"This project presented several obstacles to overcome to facilitate a repair to a burst on a 24" steel main. Primarily the location, the burst was situated on an island across a river with the only access an old road that had weight restrictions over bridge restricting the plant and equipment that could be utilised.

Therefore, as a team, we had to develop solutions whilst under pressure to get the repair completed enabling the water to be restored.

Options were provided to the client and all costs were considered. Ultimately, a decision was taken to utilise a spider excavator, but to mobilise this item of plant, the Management and team on site were required to liaise with local landowners to seek approvals for access via their properties.

The project was a real success, and the client and the locals affected by the works were full of praise for the way that the repair was facilitated. The whole team involved showed real initiative when faced with the challenges on site and went above and beyond to satisfy the landowners whose properties were affected."

**David Noakes**  
Head of Service Delivery  
On Site

