

CASE STUDY

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We are really pleased with the way the system is built up; it has a lot of strength.

From what we have seen it looks fantastic, we will monitor it over time and see how it performs.

”

Damian Williams
Wales & West



**COMPLEX IRONWORKS REINSTATEMENT
WITH ZERO COMPACTION OR HOT WORKS**



WALES&WEST
UTILITIES



MEON
DELIVERING GREAT SURFACES



PROBLEM:

Wales & West are responsible for the maintenance of many Ironwork assets. They are proactive in improving their efficient service, by being open to new innovative solutions. A twin, double cover Ironworks had previously received some maintenance works months earlier, but it had further deteriorated and was now rattling, causing disruption for the nearby residents. One of the biggest challenges faced with this repair was the covers were positioned less than 150mm apart, meaning no compaction could be applied within this zone, causing an inherent weak point. The impact of ineffective repair solutions for Ironworks, can increase the ongoing cost, use more resources and develop to become a greater problem.



SOLUTION:

Meon supported Wales & West with the installation and suggested using our HardMaster, Rapid Set Concrete Bedding and Back Fill System, topped off with our revolutionary Asphalt Repair Solution, PermaFyx L273. By using the HardMaster W620 Bedding Mortar and HardMaster W621 Flowable Backfill Concrete, the narrow channel between the 2 covers was no issue and PermaFyx L273, requiring zero compaction, was the crowning touch. The repair was sealed with UltraCrack L270, to help prevent the ingress of water into the repair, maximising its durability and longevity. All the systems used are cold applied, so no hot works equipment was required for completion of the repair.



RESULT:

Local residents were able to benefit from a safe, effective and efficient Ironwork repair. The finished result is a very secure, well protected Ironwork, with a quick service time, the repair was open to traffic in just 90 minutes. The chemical reaction bond strength, achieved with our Cold Applied Rapid Set Concrete and Asphalt Repair Solutions requires zero compaction, hot works or heavy equipment, allowing for ease of application and minimal disruption to the local road network. Due to its high strength and durability, this ironworks will outlast several more years than traditional repair systems.



SYSTEMS USED:

**Magma HardMaster W620
Polymer Modified Bedding Mortar**



HardMaster W620 is a high strength bedding mortar that provides exceptional performance in wet conditions. It has a guaranteed cure as it is a two-component product and can achieve strengths of 40N/mm2 in 3 hours.

**Magma HardMaster W621
Polymer Modified Flowable Backfill Concrete**



HardMaster W621 CD534 flowable mortar backfill concrete made up of two-components. This is a high-performance mortar containing the benefits of resin-based materials, with the ease of use of cementitious materials.

**Magma PermaFyx L273
Permanent Asphalt Repair Kit**



PermaFyx L273 is a permanent asphalt repair product based on high-performance cold applied MMA resin, which will outlast the surrounding substrate. With its finish replicating a hot-lay asphalt, it blends into the surrounding surface and meets all requirements for use on highways.

**Magma UltraCrack L270
MMA Overbanding & Crack Repair Kit**



UltraCrack is an MMA crack repair kit which is a cold plastic product, designed for crack infill and overbanding. As with all MMA products, it is very fast-curing, which makes it ideal to live traffic situations, where road closure time needs to be kept to a minimum.

PROJECT OBJECTIVES:

SAFETY



Focused on improved road safety through performance whilst removing high risk operations in support of the industries Zero Carbon goal.

DURABILITY



For every application, we aim to be able to demonstrate ways to reduce Whole-Life costs through improved system performance.

SUSTAINABILITY



Supporting central government Decarbonisation strategy with a goal to reach net zero by 2050.