

Rhino rams home economics of Ironmaster repairs

How do you manage 100 million assets which have the propensity to 'fail' every 12-36 months, have an annual repair bill of £250million, can be dangerous when they fail and cause disruption when they are repaired? The firm behind Ironmaster believe they have the answer.



The owner of these 100m assets – manholes, gullies and highway ironwork – is the tax payer: the person who finally foots the bill is the tax payer: and the victim of the failure is also the taxpayer. So what is the silver bullet which could save the poor beleaguered taxpayer money and inconvenience? The answer is 'Ironmaster', a proprietary repair system for manholes and highway ironwork which offers a unique five-year guarantee.

Approved for use on UK highways by the British Board of Agreement (BBA), Ironmaster was also part of an 18-month research study commissioned

by Glasgow City Council, which tested six carriageway manhole repair systems. So compelling was the conclusion – Ironmaster was the only system to be recommended for use on their principal routes – that the Council decided to install 500 units, throughout the city.

Today, there are nearly 5,000 Ironmaster systems installed on high trafficked carriageways stretching from Scotland to the south coast. The system's five year guarantee has already saved local authorities almost £2.5m. The 407 systems, installed in 2002 alone generated a saving of almost £1m.

Since the 407 Ironmaster systems were installed over seven years ago, they have been inspected but there has been no reason to repair them because of the integrity of the structure. Other systems would (at best) have been re-repaired at least twice. Studies demonstrate that a conventional repair, on a principal route, lasts two and half years: therefore traditional ironwork would probably have been replaced in 2005 and again in 2008.

Given the greater focus on balancing already stretched budgets, those responsible for the management of one of Britain's most valuable assets have to grapple with the most difficult financial conundrum the sector had to face for over 20 years. How do you accommodate the bill for repairing roads and highways which have been damaged by the harsh winter conditions, within the framework of a recession hit budget.

The road repair sector is faced by the double-headed conundrum of how to maintain the integrity of a road network which is over deployed (there are six million more vehicles on the road today than there were in 1997), whilst minimising the impact of repairs on carriageways many of which are currently operating at or near full capacity during busy periods, with the need to repair them immediately because of the dangers damaged ironwork poses to all road users.

What is the optimum strategy for managing the nation's road network. Should it:

- Be cost-led or performance-led
- How do you measure the long term cost and (product) performance benefits
- How do you 'manage' the process to ensure, for example, that materials used in the repair are those specified in the tender specifications
- How can you minimise the impact on road users whilst appreciating that damaged ironwork can cause injury, perhaps even death and therefore need to be addressed quickly.

Underpinning these issues is the deceptively simple cost-performance issue: how do you evaluate the long term benefits of a repair. What is the norm? A repeat repair every 18-24 months? Are 60 month guarantees on repair worth the Quality Assurance Executives time to review them? Is offering a five-year guarantee on an ironwork repair just a bid winning declaration/ a marketing ploy, or is it a commercial reality?

These were the questions posed by Rhino and the catalyst for undertaking a 'quality audit' on all Ironmaster repairs undertaken five years ago or more. The two questions posed were:

- Did the repairs require any further re-repairs?
- What was the cost-saving of specifying Ironmaster at the outset?

The audit of the 1100+ repairs undertaken in the three years spanning 2002-2004 revealed that no repairs had to be attended to.

The cost benefits were more difficult to assess. Despite reviewing various methodologies, it was not possible to develop a robust analytical tool capable of accurately measuring:

- The costs of repairing the same piece of ironwork at least three times in the course of seven years
- The economic value of not inconveniencing road users – in terms of 'disruption caused by the need to 're-repair'
- The opportunity cost of reducing the health and safety risks, as well as legal claims from road users

hurt and/or damaged by defective ironwork.

The analysis therefore focused solely on the savings made from not having to restore the original repair. Based on the knowledge that:

- Traditional repairs on principal carriageways will conventionally last two and a half years
- The average cost of these repairs would be £1,200 each
- Traditional repairs undertaken in 2002 would require a re-repair in 2005 and again in 2008.

The total maintenance cost of the ironwork for the seven year period spanning 2002-2009 would therefore be £3,600. Using this formula, it was calculated that the 1100+ repairs undertaken between 2002 and 2004 saved the tax payer over £2.5m.

Commenting on the finding Malcolm Chalmers, Managing Director, Rhino said "Asset management is critical to our customers. We know that they have to assess the long term benefits on every investment and sometimes make rational decisions based on calculated assumptions – but at the end of the day they are assumptions.

"The results of this audit prove that the engineering behind Ironmaster's repair methodology is robust and that purchasing decisions can now be made on verifiable proof, not just on assumptions based on the 'science' of this repair model.

"These results confirm that the quality of the Ironmaster workmanship and the quality of materials used makes the five year guarantee a reality. So, in addition to the £2.5m saved already, there is a further £8million in savings being made right now".

