

CASE STUDY

SCOTTISH WATER PIPE BRIDGE, ELGIN, UK



BACKGROUND

Working on behalf of client Scottish Water, James Aiken Engineering Solutions was tasked with overseeing the repair of a vandalised pipe bridge cover within Elgin, Moray. The cover had also suffered significant corrosion resulting in it being unfit for purpose.

With a new cover for the bridge required, its design had to be robust enough to permit personnel to walk over it whilst they carried out various maintenance and inspection services at the facility. It also had a requirement to allow water to run off to ensure snow and ice forming on the top of the bridge throughout winter would not lead to further corrosion. A non-slip surface and various pipe insulation was also part of the overall design criteria



CHALLENGE

The bridge's location was the main challenge for the project. Situated in a remote site, there was no direct access to the facility due to the extensive use of security fencing when the site was first constructed. This made any future maintenance difficult, with the James Aiken team having to overcome this first prior to commencing the work itself.

The team's first objective was to design and install a workable, permanent entry system which was both safe and secure. This would improve both the security of the site as well as making periodic maintenance more efficient in the future.

The project also required scaffolding to be erected over the span of the river which required extensive communication with the client and Moray Council in relation to gaining the required planning approval. The location of the scaffolding also resulted in a number of additional health and safety aspects having to be considered to ensure that the security of those working on the site was never compromised.



SOLUTION

To meet the project requirement, James Aiken produced a first-class, bespoke aluminium pipe protection system. The system also benefits from secured access which will make future inspection and maintenance easier and much more efficient.

From concept drawings through to final documentation, production and installation, James Aiken involved Scottish Water in every stage of the project's development allowing for a clear and concise programme of work. This led to an enhanced finished project that more than met the client's initial requirements.

The solution itself was produced using the breadth and depth of James Aiken's skill set and machine capabilities, with the whole project utilising the company's talented and experienced team that the company benefits from. This allowed for the provision of a fit for purpose economic solution alongside the project being completed both on time and on budget.

RESULTS

The successful completion of this project has led to a number of benefits for both the client and for James Aiken. The company's responsive and efficient approach to the work allowed the cover to be both manufactured and installed well within the client's pre-approved timescale. Thanks to the new cover, the pipes are now protected from both freezing and expansion. Adequate protection is also now in place to alleviate the potential damage caused by vandalism and burst pipes through exposure to various elements. The pipes service an entire community with fresh water so it is essential that the correct steps and precautions are taken to minimise downtime.

An offshoot of the work is also a growing working relationship between James Aiken and Scottish Water. Both companies have worked together on a number of projects since the successful Elgin completion, with a level of trust continuing to be built upon with every finished job. Scottish Water provides services to households throughout Scotland, with its scope of work giving James Aiken the potential opportunity to work closely with the company in the future across similar projects.



JAMES AIKEN ENGINEERING SOLUTIONS IS A LEADING SUB-CONTRACTOR OF FABRICATED METAL AND PRECISION MACHINED COMPONENTS WITH EXTENSIVE FABRICATION AND MACHINE SHOP FACILITIES UNDER ONE ROOF.



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