



AMCO·GIFFEN

CASE STUDY

AT A GLANCE

End Client	Environment
Principal	Agency
Contractor	AmcoGiffen
Scope	Footbridge
Contract	renewal
Date	Design and build
Duration	2021

Roxton lock, weir and footbridge was built in 1971 to carry pedestrians across River Great Ouse south of Roxton near Bedford.

The scope of the project to replace the aging concrete walkway with a new nine metre steel span.

PROJECT OUTLINE

The existing concrete span on the footway over the river had reached the end of its natural life and needed replacing.

The new pedestrian footway once installed will provide safe access as a public right of way between Roxton and Tempsford villages.

SCOPE OF WORK

- Disconnect power cable and remove existing concrete span and parapets
- Prepare supporting beams for new span by cutting back 1.5 metres clear of the existing halving joint
- Fix supporting brackets and bearing pads
- Install new nine metre steel span formed using steel hollow section primary beams with secondary upright support creating a rectangular frame.
- Parts of existing pedestrian barrier replaced and adjusted with an addition 12 posts
- Power cable reconnected
- Screed laid to transition onto replacement centre span with concrete ramps and levelling studs for project and ongoing monitoring





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AmcoGiffen fabrication shop **SUPPLY PARTNERS**

- AmcoGiffen - temporary works design
- Cook Piling - pontoon and crane arm
- RMD - temporary work props and bridge support system
- Holemasters - saw and cutting core holes
- McFarland Consulting - crack width and load monitoring
- JBA Consulting - detailed design and structural survey

CHALLENGES

Difficult temporary works, weather and access all presented challenges for us to overcome.

The unknown forces in the centre span meant that we had to develop a bespoke temporary works design. Much of the work was carried out by pontoon and deliveries were made via river access.

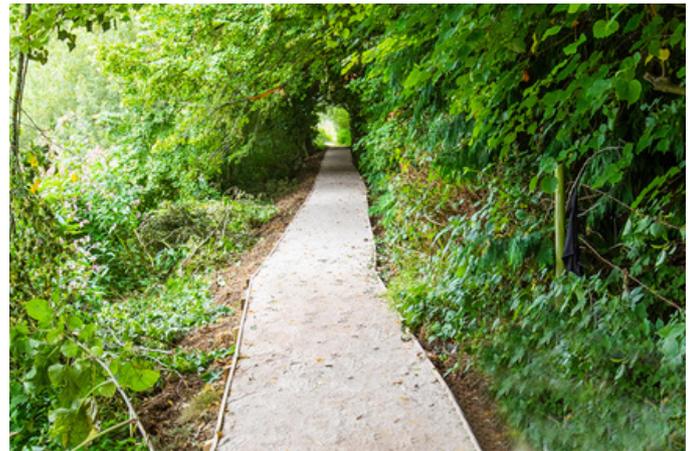
SUSTAINABILITY AND INNOVATION

During design phase we managed to modify the existing cantilevers instead of extensive repair work or even demolition.

We also benefitted from using our in-house fabrication team. The span was fabricated off site eliminating risk of environmental pollution.

We built a bespoke underslung temporary works platform to protect the river and bridge span during the project.

Materials were delivered by river to overcome land based access issues.



FEEDBACK

Following a site visit during the project, the principle designer for Environment Agency, client support framework east said:

"Thank you for hosting us yesterday. The scheme is progressing well and you've overcome the changes on site and established a good relationship with the landowner. There were no safety observations to make and I look forward to working with you again on the next scheme"