



# 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.

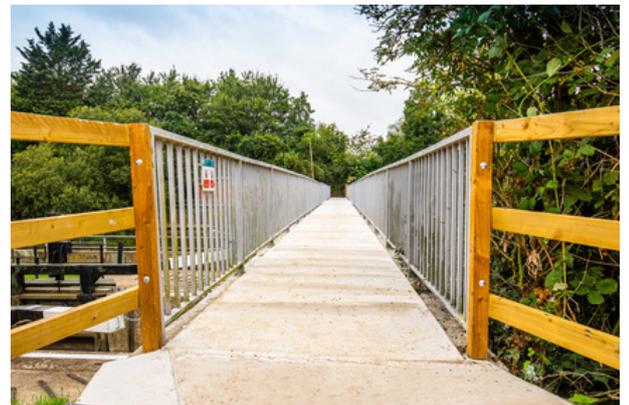
### PROJECT OUTLINE

**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.

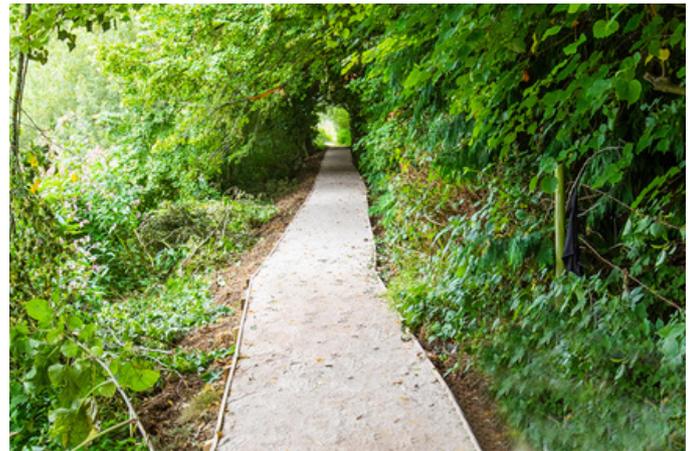
### SUSTAINABILITY AND INNOVATION

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"