

LEARNING FROM A DESIGN CLOSE CALL

Rive Axe Embankment

OSBORNE

PURPOSE

The aim of this document is to share the learning gained from a project where a design close call was raised. This example can be used to help understand the type of issue that can be raised as a design close call, and also share wider lessons for projects that require temporary works and create temporary conditions. While this example relates to a rail project the lessons are applicable to other infrastructure schemes.

THE PROJECT

In order to alleviate flooding in the local area, the existing railway embankment was to be replaced by culvert units over a length of approximately 40m. This involved the excavation of the embankment and installation of pre-cast concrete units. To enable these works to take place the existing trackside cables required temporarily re-locating to a cable bridge.



DESIGN CLOSE CALL



On 14th August 2018 a railway embankment was re-graded to accommodate scaffolding support for the cable bridge. While the temporary works of the scaffold bridge were identified, the subsequent temporary condition created to position it was given less consideration. As such, a full design assessment of the embankment stability was not undertaken. The slope was considered using standard design solutions and track monitoring was in place – this was the approach that was agreed by the design and assurance team.

- ! Re-grading works can have the potential to de-stabilise the slope and with it the track
- ! The embankment did remain stable, as confirmed by track monitoring and subsequent design checks.

LESSONS FOR THE FUTURE

- ✓ When considering delivery of a project, full attention should be given to the temporary conditions that will exist as well as temporary works that are needed. Remember that temporary works may, as in this case, in themselves create additional temporary conditions that require management
- ✓ Ensure that design decision logs and design hazard logs are well maintained and reviewed so that others can see how solutions were arrived at
- ✓ Where elements of the works are critical to the operation of the railway consider requesting a peer review of the solution
- ✓ Internally, Osborne have re-briefed all of our temporary works designers on our processes for design and checking, and we are re-assessing the competence of our Temporary Works Coordinators.

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