

Rail Embankment Failures – Four schemes in one blockade

“Thank you for your hard work in delivering this complex job at short notice, going from no scope to a fully delivered scheme in just a few weeks. The outcome has exceeded what we thought was possible.”

Network Rail

SCHEME

Templecombe and Bugley Bridge

CUSTOMER

Network Rail

LOCATION

Wessex Route, Somerset

CONTRACT

CP6 SMD Framework

COMPLETION

2020

Challenge

Blockades are disruptive to the railway and the challenge is always to maximise the work completed during a closure and then to hand back the line on time.

At Templecombe in Somerset a blockade for nine days was programmed for August 2020 to repair a slope failure in a cutting. A rapid decline in passenger numbers due to the covid lockdown provided an opportunity to move the blockade forward to June 2020. Further works were then added when an embankment failed on the same line at Bugley Bridge and it was also decided to include station improvements at Templecombe and Sherborne. Quite a feat with only a few weeks to design, approve and mobilise.

Solution

Planning and availability of resources in terms of skilled people and plant was critical. The earthwork elements were assigned to a dedicated team on the Wessex framework which has a streamlined 'Rapid Response Protocol'.

The protocol and established relationships between Network Rail, our designers Arcadis and key supply partners as part of 'One Team Wessex' expedited design and approval.

At Templecombe cutting the 15m high slope had slipped onto the rails and the solution was to place 120m of gabion basket walling to retain the toe then regrade the slope and install 600 soil nails (4m long) and netting to secure the bank.

At Bugley Bridge the track was on a wide, slow curved embankment, the solution was to realign 400m of track away from the edge on new subbase and ballast.

Our supply partners mobilised at short notice with an array of specialist plant to flex with unexpected heavy rainfall and changes to the design and sequencing. During the blockade there were 6 RRV's, 3 mobile cranes, two long reach excavators and an Engineering train to deliver the main works with extensive support plant feeding the other work sites.

To meet the unprecedented Covid constraints the 80 essential workers per shift were housed in vacant hotels, welfare was increased, a canteen provided free hot meals to the workforce,

inductions became paperless, and social distancing was policed in the same way as PPE. There was no illness on site and local businesses were supported during this difficult lockdown period.

Outcome

One Team Wessex were agile and collaborative to safely negotiate the short mobilisation, covid restrictions, and bad weather then hand back the line on time. Altogether four sections of the network benefitted from one blockade:

- Templecombe cutting was stabilised over 300m.
- Bugley Bridge had 400 metres of track realigned on an embankment.
- Sherborne and Templecombe Stations were refurbished

2020 was the fifth wettest year on record, and this trend for increasingly wet winters is impacting on aged rail embankments.

The collaborative Wessex model based upon a dedicated specialist earthworks team has proven successful in delivering nine schemes, in just eight months with each blockade safely opened on time.