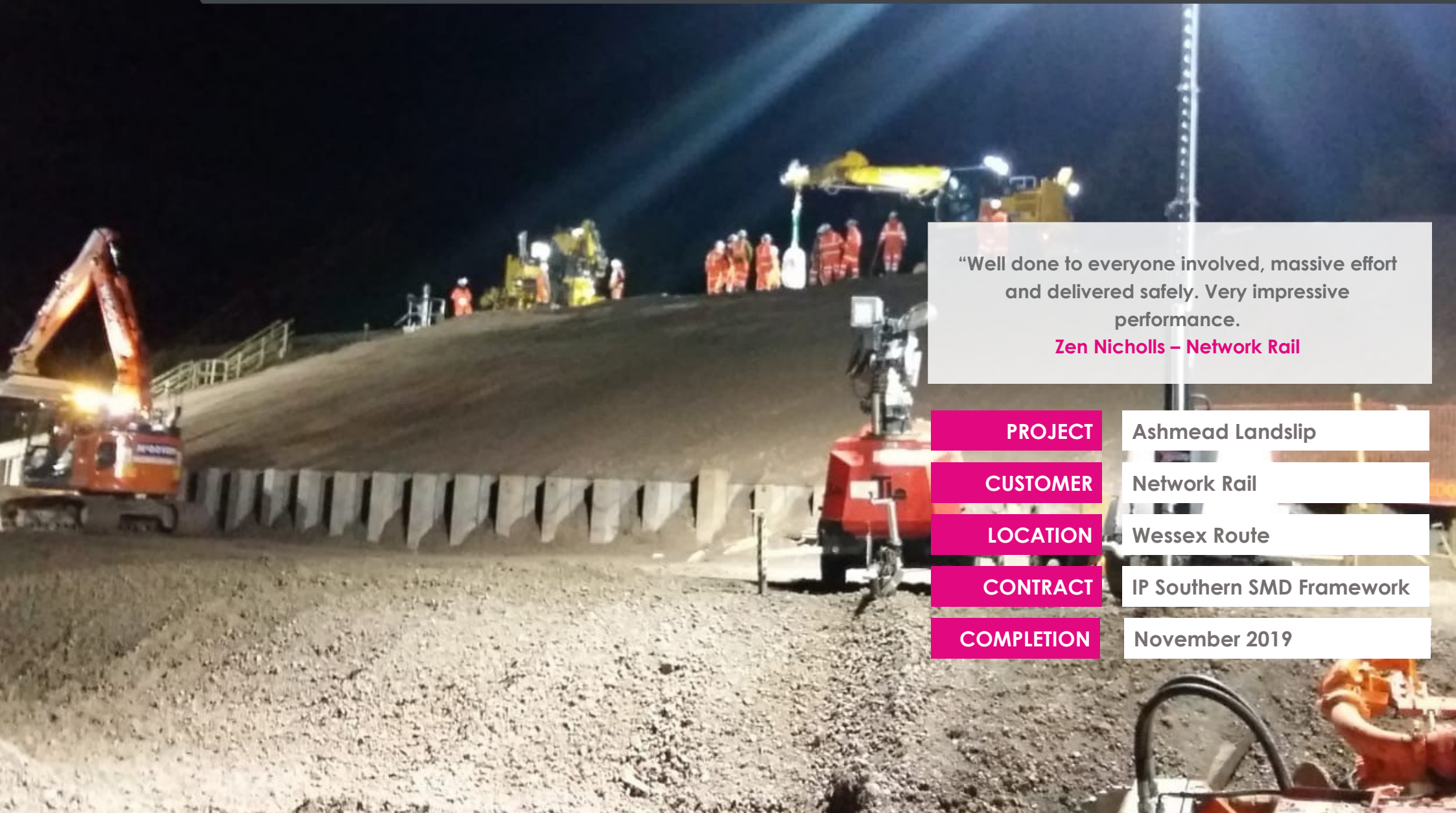
Rapid response critical to maintain service



"Well done to everyone involved, massive effort and delivered safely. Very impressive performance.
Zen Nicholls – Network Rail

PROJECT	Ashmead Landslip
CUSTOMER	Network Rail
LOCATION	Wessex Route
CONTRACT	IP Southern SMD Framework
COMPLETION	November 2019

Issue

Embankments have been part of the rail network for 200 years and many have been widened to increase network capacity. This generally involved tipping ash and spoil from the line with little design consideration to the fill material, toe support or compaction.

Today, with more frequent high rainfall events there is an increasing risk of slope failure. Safety is paramount and when a slip occurs there has to be a fast response to assess the impact and complete the repair with minimum disruption to service.

At Ashmead, near Basingstoke just such an event occurred resulting in closure of the Down Slow Line. Freight had to be moved to the fast line adding pressure to the network and a temporary bus service put on for local passengers.

Solution

The embankment was scheduled for improvement works in February 2020, but in 2019 there was a slip caused by prolonged wet weather. Network Rail restricted the speed and mobilised.

The agreed protocol for landslips is well versed and our designers Arcadis and specialist groundwork, piling, track monitoring and permanent way partners knew the drill. A skilled team was assembled to manage the complex engineering solution.

Within the first 2 days, remote track monitoring equipment was installed under possession and 3,670 tonnes of material was delivered for the haul road and piling mat. The rapidly expanding team were set up with power, data, heating and offices. In total there were over 1000 vehicle movements with the 430 HGV deliveries and staff vehicles. No mean feat from a standing start.

In parallel, 2000 hours were spent on design. WhatsApp and conference calls sped up communication and decision making between Network Rail, Osborne and Arcadis. Web data from cameras and track monitoring kept everybody up to date.

The pressure on the Route Asset Manager was intense and there is always a risk balance between working under closure or not. Five days in, with the site already working 24/7 it was decided to close the Down Slow. A critical 52 hour possession followed to complete the piling and backfill, leaving only reinstatement to resume full services.

Outcome

Fast action contained the slip to the slow line which was re-opened within 9 days.

By bringing forward the permanent design solution the team were able to eliminate future network disruption.

The ‘One Team’ relationship developed on the Wessex route enabled this quick targeted response. The professionalism and attention to detail meant that 8000 man hours of work were completed with zero accidents or incidents and everyone went home safe.