

EDENBRIDGE EMERGENCY EMBANKMENT WORKS

Collaborative working was key to the success of emergency earthworks completed by CK Rail along the railway line in Kent. Following a 30metre landslip on a section of the railway embankment between Edenbridge Town and Hurst Green stations, CK Rail were tasked with carrying out this essential work to safeguard the railway. A spell of extreme weather had led to a series of infrastructure failures and temporary line closures along this stretch of rail on the Oxted line, so it was key that the emergency repairs were completed with minimal disruption to rail services and passengers.

Site inspections revealed a rotational failure, with cracking identified at the crest, a dropped cess and toe bulge. Track and slope monitoring were installed, and topographic and ecological surveys completed, before the de-vegetation work was carried out.

CK Rail worked closely with the local authority and landowners to deliver this emergency project. Temporary traffic management systems were implemented on the highway and a 500metre temporary haulage road was installed, establishing a safe access off-track for engineers, plant and materials, to and from the site. This essential preparatory work enabled CK Rail to complete all the vital slope regrading and strengthening of the six-metre high embankment as efficiently as possible, whilst rail services continued to run safely under a temporary speed restriction.

Working collaboratively with the Network Rail Southern Region Capital & Works Delivery teams, CK Rail were also able to safely accelerate the preparation and delivery of a permanent design solution, within weeks of the earthwork failure being reported.

CK Rail engineers worked in all-weather to install 81 sheet piles, forming the retaining wall along the crest of the embankment and a King Post retaining wall at the toe sequentially. The embankment was also regraded to ensure its future resilience, with a total of over 5,500 tonnes of new materials installed.



The worksite was located adjacent to a cemetery and CK Rail engineers ensured they carried out all this work as considerately as possible, standing down on site when visitors to the cemetery were in attendance.



Following completion of all the reinforcement work to the railway embankment, demobilisation of the site commenced. This work included removal of the temporary haulage road and full reinstatement of all affected land in the surrounding area. Establishing and maintaining positive relationships with lineside neighbours is extremely important to CK Rail so we were delighted to receive praise from a local landowner regarding the quality of our work and the positive worker behaviour of our engineers. This work was also carried out as sustainably as possible with materials, including those used to build the temporary haulage road, recycled and over 100 trees and bushes replanted in the area.






CKRail

Client
DYER & BUTLER

Value
£3.5 MILLION

Project duration
**22/02/2020 - 18/05/2020
(12 WEEKS)**

Services

-  **Civils, Earth Works, Off-track and Drainage**
-  **Design Services**
-  **Plant**
-  **Structures**
-  **Vegetation Management**

Key facts

- Train services continued with a 500m temporary haulage road installed to ensure emergency work was completed off-track
- 81, 9 metre long piles installed
- Over 5,500 tonnes of new earthworks material installed
* 3,588 hours worked safely with no accidents or incidents reported
- 105 new trees planted
- Site materials recycled

“The operation was carried out very well, your men were polite and easy to deal with and did a very good job leaving the site tidy. With Thanks.”

MD Stone, landowner