Suttle Projects

Project Profile No 22/38

Tel: (01929) 439444
Email: sales@suttles.co.uk

ROCKLEY VIADUCT IV

Client: **Dyer & Butler**

Value: **£950,000**

Duration: **12 weeks**

Project Detail

Works at Rockley Viaduct are part on an ongoing project that started back in 2020. This phase of the project aims to implement a permanent design solution that will provide medium-term stability to the structure by replacing the existing damaged scour protection system and washed-out apron with a rock armour system to protect bridge columns and their underlying caissons.

Rockley Viaduct spans between two Victorian rail embankments that divide parts of Poole Harbour. The original construction of the viaduct created a very fast tide race in this part of the harbour, which in turn creates problems for the long term maintenance which is made challenging by an exceptionally fast flow of water. The project is made furthermore complicated by the fact that the other side of the viaduct, an area called ‘Lytchett Bay’ is difficult to access and can only be accessed from the water.

It provides the perfect opportunity to use 'The Little Mermaid', a remote-controlled excavator created by ourselves and ideal for use in difficult to reach areas like this one. Due to the small size of the Little Mermaid it can also work with the tide to go under the bridge so that we can work from the other side, something that would never be possible with a full size excavator that requires an operator.

Figure 1: One of the excavators on the barge approaching the viaduct

More Detail about this phase of the project:

- It is a complex project because:
  - The team have to work around the tides.
  - The team have to work from a moveable barge.
  - Much of the work is underwater so is not visible from the surface.
  - The other side of the viaduct, an area called 'Lytchett Bay' is difficult to access.
- Bathymetric surveys are used to see what is happening below the surface and in this case decide which areas have too much rock and which areas have too little.
- As well as moving rock that has already been placed in earlier phases of the project, new rock was also required. The new rock had to follow a certain specification and was supplied especially for this project. Through our sister company; Suttle Stone Quarries, the rock was transported to site.

Figure 3: The Little Mermaid on the other side of the bridge to work having gone underneath.

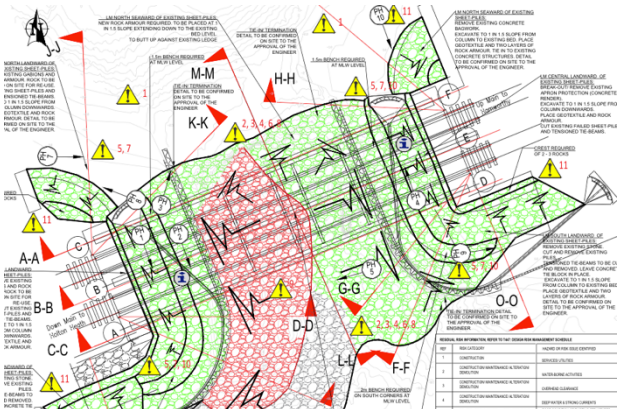

Figure 2: An example of the bathymetric surveys that the team are working from

Figure 4: The stone, having been delivered by our sister company; Suttle Stone Quarries