

Hobhole - Boston PE22 0RB

Project	JJMac 2639 - Hobhole
Location	Hobhole Lane Boston
Client	IDB Internal Drainage Board
Key works delivered	Road Crushing, Stabilisation and Surfacing
Project Duration	Dec 2021 - 2 WEEKS
Stabilised Area	6,000m ²
Earthworks	By JJMac

Internal Drainage Board - HobHole Pumping Station Road Restoration



PROJECT OVERVIEW

Public Highways Access Road to IDB Hobhole Pumping Station had deteriorated and becoming dangerous for delivery truck and the like due to subsidence to one side. The shoulders of the road needed to be reinforced before any surfacing could be done. Simply overlaying and filling the depressed area was not an option as previously done.

JJMac Ground Stabilisation offered a solution to in-situ stabilise the shoulders and to **recycle the existing road material**.



PROJECT CHALLENGES

Our team were challenged with designing a stabilised subbase for the road shoulders.

1. The roadway is a public highways and services the Pumping Station and dwellings that do not have a diversion and access had to be always maintained.
2. Environmental Agency requested that GGBS Ground Granulated Blast Furnace Slag was used for Stabilisation instead of Cement due to the reduced Carbon Footprint of GGBS as it is essentially a by-product of another process. However, the GGBS requires a small percentage of Lime to activate the curing process.

ENGINEERING AND SOLUTIONS TO OVERCOME THE CHALLENGES

To overcome the project challenges, set by the client, our team:

- Worked with the client and advised on the finding of the trial holes and preliminary testing of the host material.
- We carried out on site **CBR testing** to enable our Designers to generate a very efficient stabilisation design solution for our client
- Our team liaised closely with our client about phasing the works to allow the works to

proceed in all areas within the project programme.

STABILISATION WORKS IN PROGRESS

Once the areas for stabilisation were identified and marked out, JJMac site team set to work Crushing the surface 150mm and preparing the existing road material into a **uniform recycled material** for stabilisation.



We then mixed and stabilised 350mm to enhance the shoulders of the road and create a new **Non-Frost Susceptible Stabilised Foundation >30% CBR** on the complete roadway.

Roadway Trimmed level and ready for Stabilisation



Stabilised Roadway ready for Surfacing



The GGBS and Lime Combination was allowed 72 hours to cure without any heavy traffic. Residents cars were fine to travel on the stabilised material as they needed access.

COMPLETED WORKS**BENEFITS TO OUR CLIENT**

JJMac Ground Stabilisation were able to offer a Design and Stabilise package for the reconstruction and shoulder stabilisation on this section of the access road.

All existing material recycled and utilised with Lime and GGBS to reduce further the Carbon footprint of the works.

Cost Saving



Programme Reduction



Vehicle Movements Reduction



Imported Aggregate Reduction



Material Sent To Landfill Reduced By



Stone Layer Depth Reduction



Thanks to all involved, the roads and tracks look great. Top job.

Regards

Ed Johnson
Chief Engineer
Witham Fourth District Internal Drainage Board
47 Norfolk Street
Boston
PE21 6PP