

## Buxton Road Spixworth - Adoptable Road Stabilisation

Project	JJM2758 - Adoptable Roads Stabilisation
Location	Buxton Road Spixworth Housing Development
Client	Norfolk CC
Key works delivered	Capping and Subbase Replacement - Stabilisation
Project Duration	Oct 2022
Stabilised Area	5,000m <sup>2</sup>
Earthworks	By MC



### PROJECT OVERVIEW

- Adoptable Spine Road identified as suitable for **Capping** and **Subbase** replacement by **Cement Bound Material** Stabilisation of the site won excavated material.
- The site Drainage was installed prior to the Stabilisation works taking place with Manholes left low to be raised later.
- In-situ treatment of the material in 300mm deep layer with 4.5% Cement Addition
- Client requirements 95% Compaction and 30% CBR Non-Frost Susceptibility
- Independent Design and testing carried out by Norfolk Partnership Laboratories

### PROJECT CHALLENGES

The project programme was challenging mainly due to the high loading on the 300mm layer. Binder spreading, water delivery and mixing had to be very precise to ensure the design CBR would be achieved. Furthermore, Cement and Water are expensive resources now and must be used very efficiently.

The project has a very stringent test and compliance schedule. All target MCV and CBR test were taken daily

Poor CBR % at formation level would require careful working with heavy machinery not to damage the formation.



### 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 findings of the site won material testing and classification.
- Our site team set to work with the MC team to develop a system to allow both earthworks and stabilisation to progress efficiently.
- The site won material from the Road Box was stockpiled on site
- Site won material was treated Ex-situ on a working platform adjacent to the Stockpile.
- Treated material was lifted and carted to the road box for placing and compaction.



### Completed Works

Stabilised Capping and Subbase Replacement Tested for compliance with the specification and design.



### ADVANTAGES

**The works had numerous advantages to this site.**

- Utilise site won material from Excavations for Modification
- Reduction of Primary Aggregates for Road Construction – 70%
- Reduction of Lorries from the surrounding roads – 70%
- Cost Saving over imported Agg and disposal of excavated material – 40%