

M3 Phase 2 Deep Drainage & LNMS

Client :
Highways Agency

Location :
Surrey

Date :
2009



This scheme was carried out as part of BAM Nuttall's East and South East Area Framework project for the Highways Agency. It involved:

- extensive earthworks
- drainage
- slip road modifications
- retaining wall construction
- acoustic barrier installation
- carriageway resurfacing
- signage

All works were completed in a live motorway environment using contra-flow traffic management with 24 hour CCTV coverage, vehicle recovery and SPEC's speed control cameras.

Collaboration and Efficient Working

Initially the scope of this scheme was limited to drainage works. The collaborative nature of BAM Nuttall's framework with the Highways Agency lead to additional works being awarded which encouraged efficiency. This included the Local Network Management Scheme (LNMS) works for upgrading the existing motorway slip road.

Drainage Works

This included construction of 3km of combined carrier filter drain with pipe sizes ranging from between 350mm to 600mm. A slip formed 'V channel' with gully entries was constructed along the entire length of the drainage run by specialist partners.

Innovation

We worked with the Client's team to resolve issues with the discharge of surface water. We developed a solution that involved installation of hydrobrakes to limit flow and chambers that provided additional storage capacity.

Slip Roads

The LNMS scheme involved bulk earthworks (cut and fill) for provision of a new auxiliary lane leading to the existing slip road. In order to carry out these works a 352m long sheet pile retaining structure was constructed.

Innovation

During the construction of the retaining wall we were required to comply with access restrictions for plant imposed by the Client. At the location of an existing footbridge over the motorway we worked with our supply chain partners to devise a solution for installing sheet piles that would not be detrimental to the stability of the bridge, which in turn would not compromise the safety of the travelling public.

Ancillary Works

A 2km length of 3m high acoustic barrier was constructed. Works also included re-surfacing of a 3km length of the motorway and signage installation.