

## A92 Realignment

<b>Client:</b>	Angus Council
<b>Form of Contract:</b>	ICE Conditions of Contract
<b>Duration:</b>	Feb 2012 to Nov 2012
<b>NRS Role:</b>	NRS Project Role: Main Civil Engineering Contractor & Principal Contractor



### Main Description

This project involved the realignment of a section of the A92 Arbroath to Montrose highway. The realignment was 2,400 meters in length and the carriageway measured 7.3 meters wide with 2.5 meter verges.

Works included:

- Setting up and maintaining temporary traffic management systems for the duration of the works. Both traffic and pedestrians had to be managed for the duration of works
- Site clearance including tree felling
- Earthworks including formation of new embankments and cuttings and an area of rock cut
- Construction of new carriageway
- Installation of new foul and surface drainage system including SUDS basins
- Civils works for statutory undertakers including diversionary works
- Construction of culverts
- Hard and soft landscaping works including new grass verges, hedges and tree planting
- Installation of new lining and signing.
- Ground remediation including the removal of asbestos containing materials after the discovery of contaminated ground. AADT on this project was 6,102.

This project allowed the NRS Group to reduce the embodied CO2 content of the surfacing element of the contract. With a flexible fully bituminous surfacing specification supplied by the



client, NRS Group investigated the feasibility of a composite pavement as an alternative. On further carbon footprint analysis using CHANGER it was established that a composite pavement construction of 180mm CBGM Base overlaid with 145mm of asphalt binder and surface course would have substantial benefits in comparison to a fully flexible bituminous pavement. Beyond this, NRS Group were also able to offer our Client a 7% cost saving on tendered surfacing costs, as well as reducing the overall surfacing duration on site by several days.

Daily two-way traffic management systems were installed each morning and removed each evening during the early months of the contract to limit the disruption to road users. Only when it was essential/unavoidable, were 24hr, 7 days a week closures utilised (tie-in works). Speed restriction was only lowered below 30 mph during convoy works, which were restricted to surface course works only.

