

WALTERS

A5 to M1 Link



Project:

Dunstable Northern By-pass

Client:

Costain Carillion JV/Highways
England

Value:

£7.3 million

At-a-glance:

- New J11A motorway junction
- Construction of a 5km link road
- 7 major structures
- 750,000m³ of excavations
- Placement of 260,000t of capping and sub-base

Hirwaun House, Hirwaun Industrial Estate, Hirwaun, Aberdare CF44 9UL

T: 01685 815100

F: 01685 815101

www.walters-uk.co.uk



Walters is accredited to ISO 9001 for Quality Management, ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health & Safety.

Challenges

This £162 million project provides a new Motorway Junction M1 11A, between Luton and Toddington, which will connect a new 5km dual carriageway link road to the existing A5.

The scheme is intended to ease congestion in Dunstable, Houghton Regis and the surrounding area and to also facilitate the construction of 7000 new dwellings.

The main challenges for earthworks operations were to balance the cut/fill volumes (100,000m³ shortfall of suitable fill material), find permanent storage for the 150,000m³ of surplus topsoil and subsoil and reduce the modification of 30,000m³ of unsuitable material expected within the excavations.

Solution

In conjunction with the Costain Carillion JV, it was proposed that the link road design be amended, generating an additional 60,000m³ of cut material. Batters in the main cutting were widened and 6 on line borrow pits proposed and accepted, generating a further 50,000m³ of suitable material.

Surplus soil was reclassified as Class 4 material and placed in onsite landscape bunds and off-site sources, including the local golf club, were identified for re-use of surplus quality topsoil. Overburden initially intended to go into landscape areas was then utilised as back fill to the 6 borrow pits reducing the requirement for modification of unsuitable material to zero. All solutions combined generate a project saving of approximately £800,000.

Walters utilised large numbers of GPS and robotic controlled plant, allowing the CCJV to significantly reduce the number of setting out engineers required and Walters to trim all formations to the higher range of tolerances. With over 250,000m² of area required to receive sub-base this generated a saving of circa £115,000 when compared with conventional methods.