



Project – Morfa to Berwick Link Road

Location – Llanelli

Client – Carmarthenshire County Council

Project Description

The Morfa to Berwick Link Road connects two existing highways, the B4304, at Morfa Cross roundabout, to the west, and the A484 at the Berwick Park roundabout, to the east. In addition to alleviating congestion on the existing road network within Llanelli and providing access to land for future development, it also provides a, much needed, new access road to the National Wetland Centre and a gateway to the eastern side of the Millennium Coastal Park.

Introduction

The route of the 2.6km long road runs along the low lying marshlands on the western side of the Loughor Estuary and as a result, was constructed on an embankment, generally 1m to 2m high.

Costain was awarded two road schemes by Carmarthenshire County Council, the Morfa to Berwick Link Road and the Ammanford Outer Distributor Road (ODR), both within 15 miles of each other. The schemes were programmed to run concurrently.

The Problem

The route of the Ammanford ODR scheme was largely within a cutting through a series of colliery spoil tips. To construct the road a large amount of excavated material would have to be disposed off.

The Morfa to Berwick Link Road was located on flat wetland, which consequently required the construction of new low embankments and one high embankment at the approaches to the new bridge. Therefore, to construct these embankments large quantities of quarried materials would need to be imported.

The Solution

The material from the Ammanford ODR, instead of being sent to landfill, was imported to the Morfa to Berwick Link Road project under Waste Management License Exemption obtained from the Environment Agency.

The material was then used in the construction of the high approach embankments to the new rail bridge. The material was used within the core of the embankments, where approximately 19940m³ of colliery spoil was utilized.

The high embankments comprised of a starter layer of limestone to provide a drainage layer. The Ammanford material was then placed within the core of the embankment with a 1m wide gritstone or limestone shoulder place on the outside faces of the embankment. The Ammanford material was also used in the



underside of road construction where it was then capped using a gritstone material.

The Benefits

The re-use of otherwise waste material had several benefits to both projects including:

- Diverting waste from landfill therefore reducing the associated environmental impacts
- Conservation of natural resources through re-using material rather than importing virgin material
- Conservation of energy and CO2 emissions from reduced transportation and energy associated with quarrying
- Cost savings of an estimated £150,000 through the use of surplus material rather than virgin material. In addition to this, disposal costs were saved by diverting the material from landfill.

Key Learning's

- Communication, teamwork and planning between the two projects have been the driving factors in achieving an environmentally beneficial solution and realising huge cost savings for both projects
- Increased awareness of environmental best practice
- Planning and programming works to incorporate sustainable solutions

Contact Details

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