

Case Study Reference:

*these case studies highlight actions we are taking to reduce our carbon footprint within the Environment Agency, including benefits and lessons learnt*

## Burrowbridge Carbon Reduction Case Study

### Background

The **Burrowbridge** bank is a £270K project to repair a failing asset. This bank is part of the Parrett tidal reach and had suffered erosion, lost many of its timber piles that provided protection and had been affected by land slides. The project trimmed the riverside slope to a more suitable profile while maintaining crest width by filling at the rear. The embankments toe was also protected by new timber piles and stone while a soft engineering solution was used for the bank slope.



### Reducing the Carbon Footprint

Using the EA Construction Carbon Calculator, the predicted total carbon footprint of the Burrowbridge project was ~ 140 tonnes. The most significant contributions are from import of clay and timber materials to site and export of trimmed arisings off-site.

#### Re-use of material

The project team challenged the specification for re-profiling of the rear slope of the bund. This meant that material trimmed from the riverside slope could be reused on the land side of the bank. This saved having to import 550T of clay reducing the number of lorry movements by 30 and saving around 15T of CO<sub>2</sub>. It also reduced the transport of similar volumes of arisings off-site while providing cost savings of 5.5K.

#### Reducing material used

Access to the site was challenging, instead of using a traditional stone access track, the team hired in a temporary trackway, this allowed the team to go past the Burrow Mump (scheduled ancient monument) with minimum disruption.

Using this trackway saved the need to import 1500 tonnes of quarried material which saved 20 tonnes of CO<sub>2</sub> and reducing an additional 100 lorry movements.

#### Recycled Materials

Recycled hardwood timber piles were sourced from a local wharf being demolished which saved approximately £35K and 26 tonnes of CO<sub>2</sub> (compared to using virgin hardwood).

### The learning curve and where we go from here

This relatively small project reduced its total footprint by ~ 60 tonnes of CO<sub>2</sub> a reduction of over 40% of the predicted footprint. This project team proved that by looking at material selection and challenging the specification, large savings can be made not only in Carbon and project costs.

Prepared by: Gary Haley SHE Technician (Construction)

Date of Issue: 17<sup>th</sup> June 2011

Further information available from Gary Haley or Andrew Powell