

# Aftercare and monitoring

If properly designed and implemented, softer estuary edges should require no more monitoring and maintenance than traditional hard engineering solutions.

During establishment with any other landscape design project, there is a defects liability period for any planting, and monitoring of the design by a suitably qualified bioengineer/ecologist should be carried out two to three times a year for at least three years. If certain planting fails, this does not necessarily mean that the design has also failed, as natural colonisation may replace it, and it may be best to wait another growing season or two to see how the vegetated elements evolve naturally (assuming there is no obvious threat to flood risk management).

Monitoring of intertidal areas in the first three or so years should seek to assess whether flotsam and jetsam, grazing animals or vandalism are in evidence, and appropriate steps taken if so. Day-to-day management of vegetation will generally not be required. In the longer term (five to ten years post-establishment) further management intervention may be needed to reduce the dominance of certain species (such as Common Reed) to promote the greatest possible biodiversity.

Where timbers are used in the intertidal zone, annual monitoring of their condition (and any necessary replacement or repair) should be incorporated in the management regime. In severe weather/river flow events, parts of the design may begin to fail and/or erode and require local repair, but as long as the required design functionality is not compromised, the design may still be acceptable. If the designed bank is likely to undergo one or more cycles of major refurbishment or renewal during its design life, The Environment Agency will want full details of how you propose that this be achieved. The Environment Agency will need to be reassured that clear access to the flood defences and foreshore for people and appropriate machinery has been carefully considered and will be as straightforward as possible.

Shoreline landscape will require maintenance as with any other designed habitat, but there will be a particular need to ensure that such maintenance is informed by ecological expertise.

In all cases, it is good practice to record the results of monitoring and share them with the Environment Agency so that any advice can be improved to inform future projects.