### Managing Environmental Risk on Flood Risk Management Projects

The Environment Agency for England and Wales has direct responsibility for flood risk management for main rivers (larger watercourses) and the coast. This involves the planning, construction and maintenance of flood defences.

Environmental assessment is used to manage environmental risks associated with our projects and achieve a balance between protecting people and property and the environment. Where practical, we seek solutions that manage flood risk and benefit the environment.

This article discusses how the Environment Agency ensures that environmental issues are managed effectively on flood risk management projects.

#### EIA and Flood Risk Management Projects

A level of environmental assessment is undertaken on most projects. This could be a statutory requirement on the larger projects, or for those in sensitive locations, or be a more bespoke, fit for purpose process for others. In all cases environmental assessment is part of a formal appraisal process to understand and communicate the whole-life costs, benefits and risks associated with a project.

The main environmental effects of a flood defence project are associated with construction, and managing these relies on the Environmental Management System (EMS) of the contractor. A two tier approach ensures that environmental assessment is effective during implementation.

#### Strategic management

Our contractors are appointed under a framework agreement which, among other things, sets out environmental management requirements. For example, they are required to have ISO 14001 certification in place during the lifetime of the framework agreement. The scope of the EMS is not specified, but the agreement does set out key issues to be covered such as:

- Resource efficiency
- Use of materials from recycled or renewable sources where practicable
- Sourcing of materials locally where practicable
- Identification of opportunities for delivering low carbon solutions
- The purchase of timber from legal and sustainable sources

A sustainability scorecard collates performance data across all projects and is used to measure contractor and Environment Agency environmental performance. This is used to indicate the areas where the contractors and the Environment Agency need to improve their performance. Scorecard measures include:

- Construction site safety
- Stakeholder relations
- Including social enhancements in schemes
The sustainability measures are designed to reflect wider performance measures of flood risk management in the Environment Agency.

**Project-level management**

Contractors are involved in the early development of a project to ensure the proposed approach is feasible and to provide an estimate of the likely costs.

The mitigation and management measures identified during the EIA process are captured in an Environmental Action Plan (EAP), covering all project stages. The details will include the party responsible for their implementation. The EAP is a ‘fluid’ document that is updated as required during the detailed design and construction stages. Prior to the start of construction, the contractor is expected to translate the EAP actions and behaviours into their environmental and site management systems and processes.

The intent is that routine, on-site environmental management (e.g. pollution prevention) is covered by the contractor’s own EMS.

The EAP focuses on those mitigation and management measures that are specific to the project.

When the contractor takes primary responsibility for the delivery of a project, changes can result from ‘ground truthing’ the proposed approach. Oversight is maintained of any changes that significantly deviate from the approach stated in the documents published at the consent stage. This is to ensure the outcome is not materially worse than originally assessed and stakeholders are content. An Environmental Clerk of Works may monitor the construction process and undertake periodic audits against the requirements of the EAP.

If an environmental incident occurs, it is investigated and may trigger the requirement for the contractor to develop an action plan to address the management failure that lead to the incident. Ongoing performance will then be monitored for a period.

This strategic and project-level approach to managing environmental issues thus helps to provide assurance to ourselves and others that environmental issues are considered and managed appropriately in the planning, approval and implementation of flood risk management projects.

This article is based on a chapter in the book: Ed.Anastássios Perdicoúlis, Bridget Durning, Lisa Palframan (2012), Furthering Environmental Impact Assessment, Towards a seamless connection between EIA and EMS, Edward Elgar Publishing.

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