GeoEnviron Flood Risk Management System

The Flood Risk Management System and has been designed and developed to help Lead Local Flood Authorities manage data obtained from all the activities associated with the Flood Risk Management Cycle. The system includes a flood asset register that has been specifically designed to meet the requirements of section 21 of the Flood and Water management Act 2010.

Background

EU Directive 2007/60/EC requires Member States to assess all water courses and coast lines to see if they are at risk from flooding and to take adequate and coordinated measures to reduce the risk. It also requires them to map flood extents and assets as well as at risk humans in these areas.

The Flood Risk Regulations 2009 (the Regulations) implement the requirements of the European Floods Directive. They establish four stages of activity that needs to be undertaken by Lead Local Flood Authorities (LLFAs) within a six year flood risk management cycle.

1:	Preliminary Flood Risk Assesment	Preliminary Assesment Report for each LLFA -Deadline 22/06/2011
2:	Identify Flood Risk Areas	Where the risk of flooding is significant - Deadline 22/06/2011
3:	Prepare Flood Hazard and Flood Risk Maps	For Flood Risk Areas Deadline 22/06/2013
4:	Prepare Flood Risk Management Plans	For Flood Risk Areas Deadline 22/06/2015

Flood Asset Registers

Following the summer 2007 floods, Sir Michael Pitt recommended that local authorities should collate and map the main flood risk management and drainage assets, including a record of their ownership and condition. The Flood and Water management Act 2010 implemented the Pitt recommendations. Section 21 of the Act specifically requires Lead Local Flood Authorities (LLFAs) to:

- maintain a register of structures or features which in the opinion of the authority, are likely to have a significant effect on a flood risk in its area and;

- establish and maintain a record of information about each of those structures or features including information about ownership and state of repair.

Why do I need a Flood Risk Management System?

Pitt recognized that having access to up to date information on the location and condition of flood defence assets is an essential part of efficient management of flood risk. By collating information on, and mapping, these assets, local authorities would be able to:

- develop more informed maintenance regimes which can take account of assets important for managing flood risk, particularly in high risk areas.

- establish where all their own drainage and watercourse systems are, allowing for quicker identification of the responsible authority in incidences of flooding.

- produce and publish a maintenance schedule for their own assets as well as providing guidance to riparian owners as to how they should maintain their assets.

It is clear that the implementation of the six year flood risk management cycle and the flood assets registers will require that LLFAs have appropriate data management systems in place. In fact the selection of appropriate data systems was identified as an "immediate action" in the Environment Agency PFRA guidance note.

What is the GeoEnviron Flood Risk Management System?

GeoEnviron is a suite of bespoke environmental data management solutions for local authorities. The system is modular allowing you to implement only the features that are relavant for you. It consists of a SQL server relational database management system (RDBMS) and a tightly linked Geographical Information System (GIS)...

Key Features

The Flood Risk Management System has been developed in line with the latest DEFRA guidance and allows you to:

- **Develop a Public Asset Register** – a comprehensive database allows you to register and manage all the key information that you are likely to collect for each flood defence asset including its location, condition, ownership, performance and detailed specifications.

- **Collate and manage information on Flood Risk Areas** – the system allows you to register identified local and national flood risk areas and collate and manage local information on them. This includes information on sources, pathways and receptors and data such as timing and extent of historic and future (potential) flood events and their consequences.

- **Prioritise Flood Risk Areas for action** - The system includes a flexible prioritisation system that allows you to prioritise flood risk areas based on factors such as the number of people that may be affected and the potential loss of life, the number and type of economic assets that could be damaged, or the area of agricultural land that could be affected.

- **Easily map and visualise your data within a Geographical Information Systems (GIS)** - The system includes a seamless integration to GIS including ArcGIS, MapInfo, Cadcorp and GGP. All options offer easy and powerful spatial visualization of your data (i.e. location on flood risk areas, assets, extent of past and future floods etc).

- **Ability to create planned inspections and maintenance programmes** - a powerful inspection and maintenance scheduler allows you to create fixed interval or flexible inspection and maintenance programmes. Each user has access to their own diary that gives an overview of inspection and maintenance tasks for a given period.

- **Track and manage incidents/problems** - comprehensive case management facilities allow you to register and track incidences (i.e. failures, complaints etc) and actions related to a specific asset.

- **Management all your associated documents** – comprehensive document facilities allow you to link any number of external documents (i.e. photos, Word docs, Excel spreadsheets, e-mails, videos) to a site or asset record.

- **Easily report on implementation progress** - Powerful customisable reporting facilities allow you to easily extract the data that you need from the system. A large range of integrated reports are available to provide information on specific assets and jobs as well as to provide information such as performance or KPI measures. All reports can easily be exported into Excel. Additionally you can create your own reports using Infomaker, an easy to use reporting tool.

- **Manage contacts** – a BS7666 compliant contact/address management database allows you to manage details of contacts of officers from relevant organisations and authorities, asset owners, contractors etc and their roles and responsibilities.

- **Budget Management** - The system includes budget management facilities that allow you to track of all costs incurred in maintenance of an asset (i.e. time, parts, contractors, mileage etc):

- **Mobile data collection** – The system can be purchased with mobile applications that allow data to be collected and updated in the field (i.e. when carrying out inspections of assets etc).

- **Configure functionality for each user** - Not all users would require full access to the module. The system allows you to control who can use it, what they can see and what they can input or change. Each user can be allocated specific system privileges so that they only have access to the functionality they require, ensuring that the system is as secure and user friendly as possible.

- **Share information via internet/intranet** - GeoEnviron Web solutions give you the opportunity of publishing information contained within the Asset Register to the intranet or the internet.

Benefits

The benefits that you will realize from implementing the GeoEnviron Flood Risk Management System include:

- **Fulfillment of your legal obligations** - Fulfill the requirements of section 21 of the Flood and Water management Act 2010

- **More effective flood asset management** - Develop better insight into which assets are key in an area and their current status. This enables you to develop more informed and targeted maintenance programmes.

- **Improve your strategic flood risk management** - Identify defended and undefended areas and feed information back into your flood risk management strategy.

- **Improve effectiveness and efficiency of responses in times of floods** - react quicker and more effectively during flood events by being able to quick identify relevant assets and responsible authorities/persons.

- **Develop more effective relationships with partners** - Collate and share information across local authority boundaries allowing for better coordination of actions in times of emergency.

- **Make better use of limited resources** – Focus your resources on assets that are critical in reducing flood risk in your area.

- **Training and ongoing support and maintenance** - We supply the system with full top quality training and support to ensure that you get the most out of it.

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