A major pharmaceutical company required a firewater runoff risk assessment for a manufacturing facility in the NW of England.

Their objective was to meet a corporate objective to provide appropriate firewater retention for critical facilities.

The firewater risk assessment was required to determine the need for containment at the site to prevent off-site discharge of polluting firewater.

The client required the risk assessment to:
- Meet company corporate fire safety requirements
- Provide a realistic review of the possible fire scenarios for the site
- Provide cost effective recommendations for additional firewater containment where needed

Solution
ABB was engaged to carry out the study as a result of the following:
- Specific knowledge of pharmaceutical manufacturing processes
- Expertise in fire safety management, including fire scenario development and related firewater generation
- Experience and expertise in drainage, effluent containment and environmental impact assessment

The risk assessment comprised the following scope of works:
- Description of the site, process operations and environmental setting
- Description of fire protection and fire fighting measures and existing retention infrastructure
- Development of fire scenarios and associated firewater runoff rates and volumes
- Hazardous substance and environmental impact assessments
- Recommendations for firewater control and management together with priority ranking and cost estimates
ABB expertise in civil and hydraulic engineering was utilised to provide low cost solutions to the provision of firewater containment; this included the installation of drain valves to allow retention of runoff within the existing site drainage systems and site roadways.

Benefits
The ABB approach to the risk assessment works brought the following benefits to the client:

- Site compliance to corporate fire safety requirements
- Practical and cost effective solutions for firewater containment were provided
- Confidence that potential fire events would not lead to off-site pollution by contaminated firewater