

Flood Risk Evaluation

Client – Confidential

One of ABS Consulting's clients operates a brewery in central Europe. Following the central European floods which affected the facility in August 2002 the client's risk management group took steps to investigate and potentially mitigate where possible further damage from future events. ABS Consulting's risk engineering group were commissioned to undertake an independent flood risk assessment of the brewery to establish the facility's present flood exposure and to provide practical recommendations for further mitigation.



The scope of the study focused on:

- assessing the local flood hazard for the site for a range of return periods.
- identifying the key flood vulnerabilities of critical buildings and plant
- conducting a risk assessment to evaluate Probable Maximum Loss (PML) and Business Interruption (BI) values

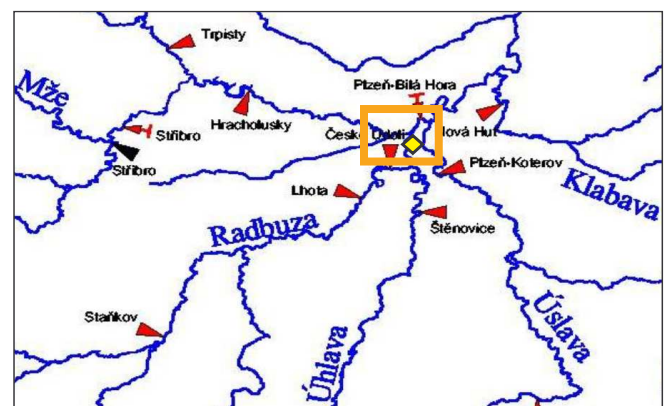
The survey identified the potential entry points of water from either surface flow (river breaching the banks) or underground routes (e.g. via drainage & sewer systems) into the main production areas and warehouse facilities.



Flood prone areas were identified and equipment in these areas noted and evaluated with respect to flood vulnerability. Special attention was paid to the adequacy and efficiency of the newly installed riverside flood wall and non-return valve located at the lowest point of the sewer system.

The study successfully established the link between the water ingress routes, water volumes and mitigation effectiveness. Plots of flood height and PML against return period were developed for a range of scenarios including failure of mitigation actions which relied on human actions.

The results of this independent study allowed the client to negotiate for appropriate insurance



coverage and also to identify further mitigation measures.