Project 1 – Risk Based Methodology (RBM)

Overview - The Risk Based Methodology (RBM) was developed to design a national, risk-based approach to coastal monitoring in Wales. It would coordinate and improve the consistency of coastal data collection, and also help to inform strategic decision making when determining high risk sites.

To quantify the risk associated to each Shoreline Management Plan (SMP) policy unit, a score was determined based on three factors:

1. Policy and Schemes

2. Asset Risk

3. Coastal Processes (flood and coastal erosion)

Fig.1 Key factors influencing RBM score and a demonstration of the Tidal Flood Risk Model (blue) and erosion (brown) buffers used to capture and quantify asset risks in Mumbles, Swansea.

Fig.2 Population heat map and 3D visualization of RBM scores. Dark red/taller sections represent highest risk, whiter/lower sections represent lower risk. Note the correlation between population density and high-risk frontage in both S/N Wales.

Aim/Objective – To design a national, risk-based approach to coastal monitoring, that would be cost effective, prioritise investment by providing consistent and seamless data to end users and improve knowledge based skills, building partnerships with Risk Management Authority's.

Who/Collaboration – Wales Coastal Monitoring Centre

Results – WCMC have established an ongoing data collection programme designed on the RBM