# Bluesky Aerial Data Helps Model Flood Risks Across England and Wales

Aerial photographs and detailed 3D elevation models purchased from Bluesky's newly launched Map Shop are helping JBA Consulting model potential flood risks. The aerial photomaps, LiDAR (Light Detection and Ranging) data and DTM (Digital Terrain Model) are being used for testing JFlow – JBA's award-winning hydraulic modelling software. In addition, the data are being utilised in the preparation and delivery of training courses for the software.

JFlow is a two-dimensional hydraulic model which solves the St Venant Shallow Water Equations to model the movement of water over the ground. JFlow was developed by JBA to meet the needs of clients who require estimates of flood depth, velocity and extent for a variety of sources of flooding, including fluvial, rainfall and defence/dam breach. Maps produced by JBA using JFlow have been used to assess flood risk by a large number of government and insurance clients in locations all over the world.

JBA is constantly researching ways in which JFlow can be improved to allow faster and higher resolution solutions, without sacrificing its robustness and accuracy. The Bluesky Lidar data play a crucial role in this process, providing the boundary conditions for a number of model test cases that are used to verify the accuracy of new versions of the software. The aerial photomaps, meanwhile, are used by JBA to illustrate the numerous ways in which JFlow can be applied.

JBA selected the Bluesky data as it provided the coverage required at a competitive price. Bluesky recently launched its new online map shop with a range of free data and special offers including 40% saving on Ordnance Survey MasterMap Topography Layer. The Bluesky Map Shop currently contains complete nationwide coverage of aerial photography with multiple images available for every location, and resolutions ranging from standard 25cm up to 10cm in many places. Visitors to www.blueskymapshop.com can also select 3D data including Digital Terrain and Surface Models (DTM / DSM) for all of England and Wales and highly accurate Lidar data for most areas, with new data being added continually.

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