

The use of UAV for Hydraulic Structures Observation

Alexandre Santos ¹

¹ *Consultant Skyeye, Portugal*

E-mail: alexander.santos@skyeye.pt

ABSTRACT: UAV can fly over infrastructures in hard to reach areas and acquire information using multiple sensors. The most common is a photo camera which can be used for video footage and orthoimagery production. These images can produce very accurate 3D point cloud models (using Ground Control Points obtained by GPS and RTK) much like a LIDAR system. Water discharge infrastructure in dams requires a close inspection to ensure that discharge is not producing excessive erosion in the concrete and river margins. UAV provide a good solution for these close inspections in hard to reach locations. In addition thermal and infrared imagery can provide additional information on water seepage in infrastructure like dams and river levees.

Keywords: Ortho imagery. Very high resolution imagery. 3D Modeling.