

UNIVERSITI TEKNOLOGI MARA

**ACCESSING AN ACCURACY OF UAV
MAPPING IN DETAIL PLAN
PRODUCTION**

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Thesis submitted in fulfillment
of the requirements for the degree of
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AUTHOR’S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Assessing the accuracy of UAV mapping in detail plan production. The main purpose of this project is to assess the comparison between UAV and conventional mapping for Kg Gong Manok, Pasir Puteh, Kelantan. The mapping of topographic using ground based surveying techniques is sometimes consuming and problematic. Recently, the flight of UAVs operates with high degrees of autonomy by the global position system and on-board digital camera and computer. Unmanned Aerial Vehicles (UAV) technology has revolutionized the aerial photogrammetric mapping due to its low cost and high spatial resolution. It enables mapping the land use with greater accuracy in both 2D and 3D. The “DJI Phantom 4 Pro” drone was selected as the UAV platform to acquire image data. The UAV-based mapping can be obtained faster and cheaper, but its accuracy is anxious. In this study, we have developed a fully automated and highly accurate engineering approach for detecting land use, which is based on textural information from orthophoto and elevation information (Digital Surface Models) obtained from the drone. The Agisoft software was used to develop the orthophoto and a Digital Surface Model (DSM) and the DSM was validated by using the ground control points.

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