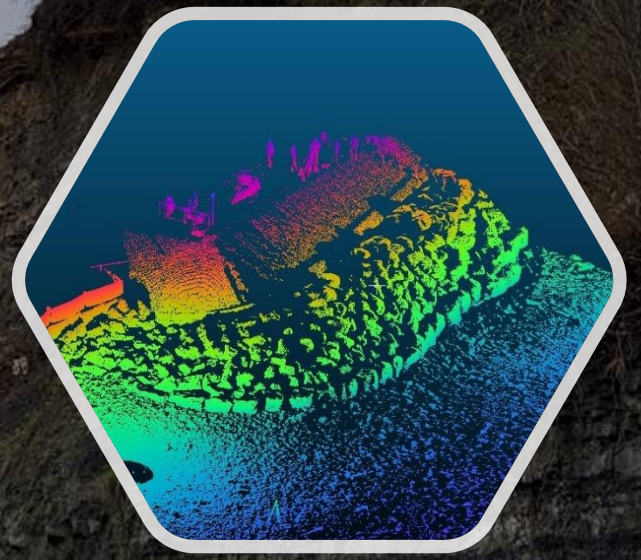
Project 38 – Point Cloud Technique Comparison



Overview - The WCMC and associates have been collecting LiDAR (point cloud) data on Welsh beaches. As this type of data provides incredibly large datasets requiring intensive processing, the average computer is not able to process this data and there are limited options to prevent time-consuming, power-hungry processing.

Aims-Objectives - To develop a method of creating appropriate outputs from point cloud datasets and automate the process as much as possible. To identify the advantages and disadvantages of using Point Cloud data and compare to other currently used techniques.

Who/Collaboration – Hannah Richards, Will Russell

Results – A method for processing and analysing point cloud data has been produced, including quality controlling future data. Results from this processing method are compared to previous manually collected topographic data. These results show profiles are most similar when point cloud data is sliced at a thickness of 10cm. Using a cleaned dataset at this thickness, profile noise variation is minimised but often not eliminated entirely. Profiles derived from DSM data also provide promising results but are not preferable to direct point cloud slicing. Suggestions are given on the necessary site conditions for which the collection of point cloud data is appropriate, including the minimal presence of vegetation on features of interest such as cliff faces.