

Sustainable Drainage Systems (SuDS) are increasing in importance as a tool to manage urban runoff, but little is known of their long term, compound effects upon groundwater level and flow patterns. To investigate this, a detailed knowledge of the behaviour of groundwater flow is required. This study focuses on the city of Glasgow, where the hydrogeology is poorly understood, in part due to the complexity of its bedrock and superficial deposits. By marrying the output of 3D geological framework models of the Glasgow area, created by BGS using GSI3D software, and the groundwater modelling code ZOOM, we hope to discretise the varying lithologies of the subsurface and their different permeability distributions to an enhanced degree and therefore improve the accuracy of flow simulations. This will provide the basis upon which to build a better understanding of the groundwater system and hydrogeological processes in the region, and thence a platform from which to investigate the potential future impact of SuDS. Potential exists to compare the outputs of the hydraulic model using different permeability inputs from both the GSI3D geological framework model and a Voxelated stochastic model.