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| **School of Engineering** | **Method Statement** |
| **Title** | |
| **Location of Activity**  Boldrewood Campus, 178 | **Date**  14/Oct/2024 |
| **Assessor** | **Contact Details**  *Tel:*  *Email:* |
| **Supervisor**  Prof. William Powrie | **Contact Details**  *Tel:* [*+44 23 8059 3214*](tel:+44 23 8059 3214)  *Email: W.Powrie@soton.ac.uk* |
| **Introduction / Overview.**  *Background description to the project. What will you achieve? How will you do this? Why is this required?*   * The railway system is regarded as a crucial factor in the economic development of every country, particularly in the UK. * Future progress depends on enhancing resilience while also improving cost-effectiveness and reducing carbon emissions. * However, there are certain limitations regarding the provision of high-capacity and high-speed rail services. * In fact, if such infrastructure is established, the maintenance threshold could be adversely impacted, potentially leading to damage to the rail systems. * The project will address this issue and will focus on a more detailed examination of subgrade threshold behavior. * This study will be conducted through experimental research, including cyclic tests using a hollow cylinder apparatus, along with geotechnical finite element analysis utilizing an appropriate soil model. | |
| **Description of Task and how it will be carried out.**  *Including any diagrams, materials, samples and equipment to be used as applicable.*  As this study will be conducted in the laboratory, soil samples including sand, clay, and silt will be utilized, along with equipment such as the triaxial device and the hollow cylinder apparatus. Additionally, any necessary geotechnical finite element analysis will need to be addressed. | |
| **Control Measures including training, PPE**  *Identify significant hazards and actions/control measures to be taken.*  Slips, trips and falls take place, as in most workspaces. Equipment should always be stored in the correct place when it is not being used, and care taken when using long electrical cords so that people do not trip over them. | |
| **Emergency Arrangements**  Emergency contact information, how to act during an emergency, wearing protective clothing, Wearing face shield | |
| **Additional persons involved in activity**  *Name(s), username(s), ID number(s)*  None | |