

School of Engineering	Method Statement
Title <p style="text-align: center;">3D Printing Farm - GDP1</p>	
Location of Activity Highfield Campus, 13	Date 30/Oct/2024
Assessor John Walker	Contact Details Tel: 02380594501 Email: J.Walker@soton.ac.uk
Supervisors Ara Khodavirdi Gary Underwood	Contact Details Tel: 07599 493309 Email: A.M.Khodavirdi@soton.ac.uk Tel: 07889 220541 Email: g.s.underwood@soton.ac.uk
Introduction / Overview. <i>Background description to the project. What will you achieve? How will you do this? Why is this required?</i> <ul style="list-style-type: none"> • The rate of 3D printable designs under open licenses is growing exponentially, enabling new education and market opportunities for lower costs and easier implementation. • Although 3D printers have become more “user-friendly” to establish themselves in the consumer market, automated solutions that autonomously coordinate printers to delegate tasks and mass-produce prints are less prevalent. • This GDP aims to develop a highly user-independent system/product capable of coordinating numerous 3D printers of various models and printing types that is easily scalable. • The system should be developed with attention to human-centric design and ease of use while also performing in such a way that all design requirements are completely fulfilled. For this purpose, intensive prototyping should be carried out through the product’s development. 	
Description of Task and how it will be carried out. <i>Including any diagrams, materials, samples and equipment to be used as applicable.</i> As this project will be conducted while operating university-provided 3D printers, a workspace with electrical-socket-access for the printers and other hardware is required. Additionally, the hardware and other electronics being integrated to the system would need to be laid-out in this space and then be stored easily at the end of work; for which a sizeable working area is required.	
Control Measures including training, PPE <i>Identify significant hazards and actions/control measures to be taken.</i>	

Slips, trips and falls can take place. 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. Hardware and electronics should be inspected and/or PAT tested to prevent major electrical hazards. 3D printers' nozzles will heat up to 200°C during operation, so the nozzle is to never be touched while the printer is or has recently been in operation. Lifting of printers heavier than 20kg should be performed by more than one person.

Emergency Arrangements

Emergency contact information (as available and indicated in the workspace and at the back of student ID cards), how to act during an emergency, wearing protective clothing, sterile work conditions when using tools.

Additional persons involved in activity

Name(s), username(s), ID number(s)

- Alejandro Parra Pintado, app1n20@soton.ac.uk, 31659853
- Ben Collins, bc8g21@soton.ac.uk, 32888538
- Danae Topi, dkt1u19@soton.ac.uk, 31425887
- Tim Ericksson, etae1n21@soton.ac.uk, 33139636
- Victoria Heppinstall, vah1g20@soton.ac.uk, 31693792