

# 3YP - Engineering in Society Supporting Statement



DEPARTMENT OF  
**ENGINEERING  
SCIENCE**



Please complete this supporting statement as a group/team and include one copy with your report submission at the end of your report. (This statement does not count towards your page count). This statement is not assessed, but ensures that your group have considered these important topics

<b>Project Title:</b>	9. System and Software Design of a Multi-agent Aerial Robotic System
<b>Student Name:</b>	<b>Date:</b>
Huirui Dai	19/05/2025
Samuel Grace	19/05/2025
Jihwan Shin	19/05/2025
Rory Millard	19/05/2025
Thomas Turner	19/05/2025

Please indicate exactly where in your project submissions (Report and/or Logbook) the following topics have been considered.

## Technology Strategy – Societal, User, Business and Customer Needs:

Section 14 in the report discusses the applications of technology strategy techniques used to understand the needs of society, the user, the business and the customer. In Section 14.1, the Strengths, Weaknesses, Opportunities and Threats (SWOT) posed to the operation are analysed in a SWOT matrix. This process addresses the business needs. In Section 14.2, a House of Quality (HOQ) is used to give detailed consideration to the interaction between the business and customer needs. There is significant overlap between the user and the customer because the product would mostly be sold to demining operations who would also be the end user. The safety of the user is addressed in the Safety and Risk section of the report. The societal need of efficient demining is considered in the HOQ, and the environmental aspects are considered in the Sustainability and the Environment section.

## Project Financing:

Financial viability and competitor comparison in Section 13

## Sustainability and the Environment:

Sustainability considerations are addressed in Section 15 of the report, covering environmental impact, hardware modularity, and energy management. A sustainability brainstorming during the MT Week 7 group meeting and recorded in the logbook.

## Diversity and Inclusion:

Team Code of Conduct is shown on page 3 of logbook decided based on discussion during 2024-10-15 meeting. Integration of new member (Thomas Turner) who joined in HT was discussed in 2025-03-03 meeting for an inclusive work environment. User interface takes into account colour-blind friendly designs as demonstrated in section 11.2.2 of the report.

## Considerations of Health and Safety:

Redundancy discussed during the 2025-01-24 meeting. Failure detection was highlighted during the 2025-02-17 meeting. Key operational risks identified and mitigated in Section 12.2 of the report, Manufacturing and Operational Safety, are discussed in Section 12.3 of the report.

*Refer to page numbers, section numbers, etc. Please refer to the example Supporting Statement.*