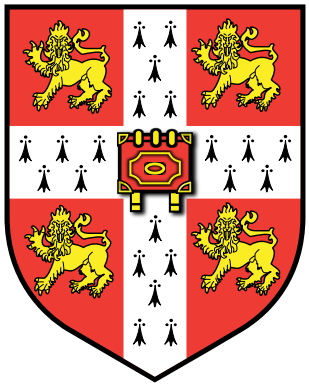
Preliminary Design Review

Cambridge University Unmanned Air Systems Society

University of Cambridge



Team Members

Nathanael West	Engineering,	4th year
Philip Salmony	Engineering,	4th year
Ximin Sun	Engineering,	3rd year
Ricky Kawagishi	Engineering,	1st year
Conor Hocking	Engineering,	1st year
Jeff Wang	Engineering,	1st year

Supervisor

Dr. Richard Roebuck

Sponsors

Cambridge University Engineers Association
Cambridge University Engineering Society
Student-led Projects and Industry Partnership (The Boeing Company, Marshall Aerospace and Defence Group, McLaren Technology Group)

1 Project Management

- project plan with main activities, lead times, and dependencies
- table summarising risks and their mitigation

2 Requirement Verification

Table with list of requirements and intended verification by design.

3 Performance Calculations

preliminary aerodynamic, structural, and peformance calculations supporting the initial sizing, basic stability and control calculations, and weight and balance estimate.

4 Cost Budget

initial budget allocation for COTS items

5 Safety

- table of hazards and mitigating design features
- description of RF compliance
- FTS

6 Design Description

- functional description, rationale for selection of systems (airframe, propulsion, flight controls, navigation & mission control, sensors, image processing, autonomy, payload carriage, fts) $->$ highlight innovative features
- diagram showing hte preliminary system architecture and data flowfor navigation and mission control, flight control, vision sensors
- overall layout & description with three-view scale drawing

7 Test Plan

short summary of any testing (flight testing, structural loads)