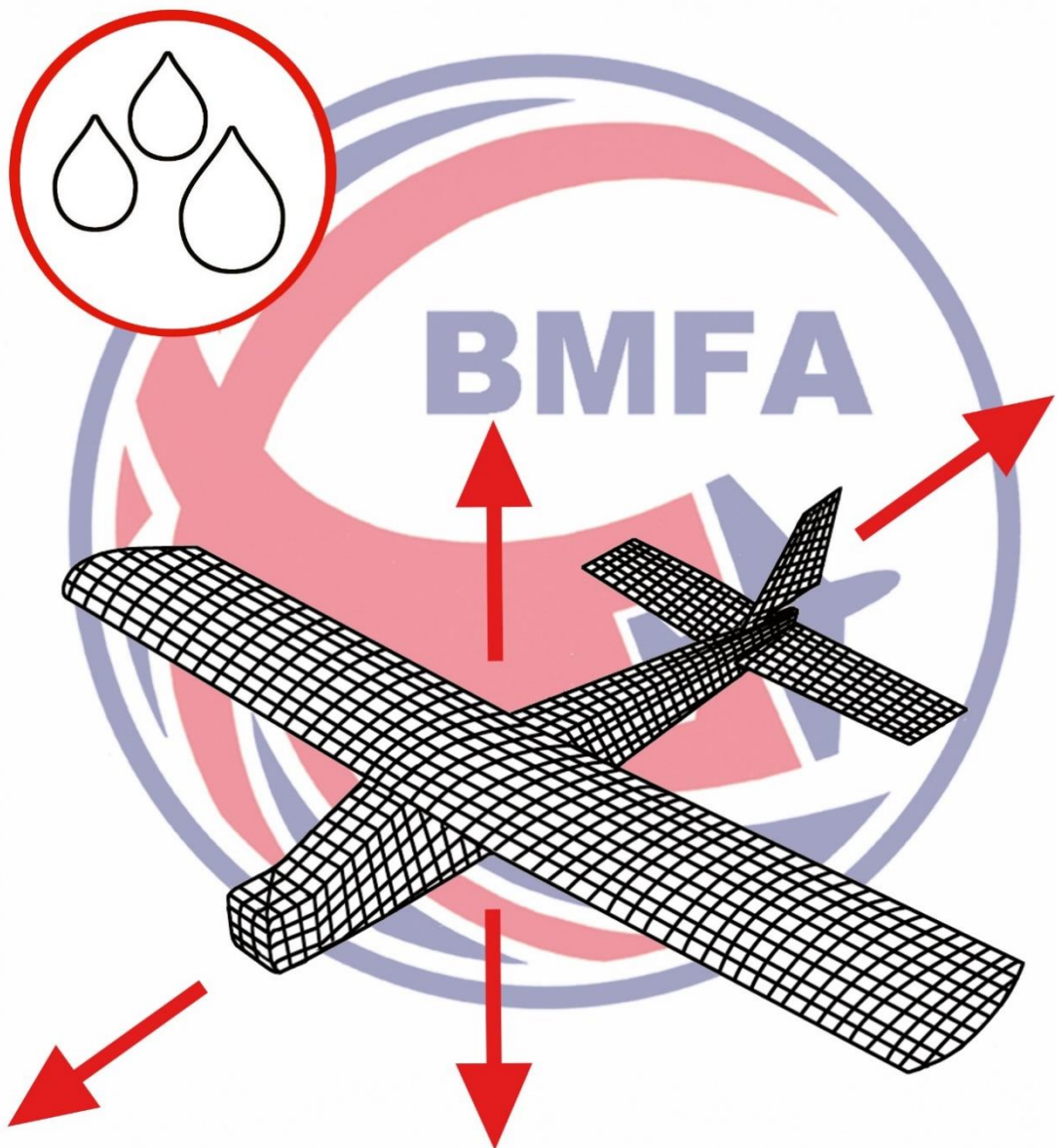


British Model Flying Association

2023

Payload Challenge 5

Weight



British Model Flying Association
2023

University and Schools
Payload Challenges

Dates Notice

14th & 15th June 2023

**National Centre for Model Flying
BMFA Buckminster
Sewstern Lane
Grantham
Lincolnshire
NG33 5RW**

In Partnership with



Supported By

BAE SYSTEMS



 **ROYAL
AIR FORCE** **Engineering**

 **ROYAL
AIR FORCE**
model aircraft

The British Model Flying Association invite your university or school to enter a team or teams in the

2023 **Payload Challenge 5** **Weight**

The information contained in this brochure provides a detailed overview of the 2023 Payload Challenge 5 (weight) as well as all information and forms for prospective entrants. We look forward to meeting your staff and students in 2023.

Should you require any assistance please contact the BMFA Challenge Co-ordinator.

Manny Williamson
manny@bmfa.org

NOTE

These competitions are supported by cash prizes, both for the university department and the individual members of the winning team.

INTRODUCTION

University degree courses in engineering subjects provide an excellent technical and theoretical basis for students wishing to embark upon a career in the engineering or aviation industry. However, it is often the case, that universities lack the facilities to allow students to gain practical experience working on meaningful design, manufacturing and operational projects. This is particularly so in aviation where full size aircraft projects demand large and expensive facilities if the projects are to be realistic. Although it is perfectly feasible for students to undertake aircraft design projects, these will inevitably feel incomplete unless they result in a real flying machine. The Payload Challenge Competitions are intended to fill this gap, whilst at the same time providing the framework for a compulsive, enjoyable and competitive experience.

Although the competitions centre on the design, manufacture and demonstration of model aircraft, the aim is to relate this, as far as possible, to the activities and processes that would be used in a full-size machine. To this end the competing aircraft have to perform a genuine operational task in terms of payload, power plant type, etc. Furthermore, the aerodynamic and structural design of the aircraft must be properly assessed in order to predict operational performance, and this assessment has to be presented in the form of a design report and design drawings.

The project is intended to be carried out by A STUDENT OR GROUP OF STUDENTS, and this gives them valuable experience operating as a team in much the same way as they will ultimately have to do in their industrial careers. Furthermore, they are given the opportunity to demonstrate their presentation skills when they give a short talk about their machine. The importance of the presentation should not be overlooked, as valuable points can be gained. In past years we have noted that teams often miss this opportunity to gain additional points.

It is not intended that teams entering the competition are necessarily studying aeronautics and indeed many of the past winners have come from universities that do not have an aeronautical engineering faculty. Many students are undecided on their ultimate career direction when they embark upon a university course and it is the experience gained at university that will often point them in a particular direction. The competitions provide such experience in aviation technology and this may provoke an interest in aviation that might otherwise not arise.

It is important that all competitors read the rules carefully in order to fully understand the task which has been set.

It is very strongly recommended that the help of an experienced aero modeller is enlisted from the very start. Local contacts are available from the BMFA office.

In Partnership with the Royal Aeronautical Society

- The Royal Aeronautical Society (RAeS) is pleased to be able to once again join the BMFA Payload Challenge event.
- The RAeS will provide Aerospace Professional support for judging and operation of the competition
- This support for the competition is part of the RAeS outreach programmes to schools, colleges and universities.
- The RAeS also provides career support to aspiring and established Aerospace Professionals and details can be found on its website at <https://www.aerosociety.com/careers-education/>



GENERAL CONTEST RULES

CONDUCT

G 1.1 The maximum number in a team will be five students plus a manager and a pilot.

G 1.2 For the flying element of the contest a pilot can be supplied by the contest organisers if required.

G 1.3 It is important that all team members including the pilot attend the morning briefing.

G 1.4 Teams should familiarise themselves with the contents of the competition rules brochures.

G 1.5 Deliberate or repeated violation of safety rules may result in the team's expulsion from the competition.

G 1.6 In the event of unsportsmanlike conduct, the team will receive a warning from the Competition Director. A second violation will result in expulsion of the team from the competition.

G 1.7 The Competition Director reserves the right to ground any aircraft if in his opinion, or that of his appointee, the aircraft does not meet an appropriate standard of construction or radio installation.

AIRCRAFT CONFIGURATION

G 2.1 Aircraft must be of fixed wing configuration (no rotating lifting surfaces).

G 2.2 The specified power system for each category must be used.

G 2.3 Only the battery pack supplied by the organisers may be used for the flight competition.

G 2.4 No modification to the motor is permitted.

G 2.5 The specified "isolator" (fuse unit) must be fitted.

G 2.6 The "isolator" must be mounted in such a location as to be readily accessible by team members and also easily visible to flightline marshals.

G 2.7 The Isolator unit must be located a minimum of 100mm from the propeller arc and orientated so as to promote removal of the fuse predominantly away from the direction of the propeller arc (25 degree minimum).

G 2.8 It is important that the unit is affixed to a suitably sturdy area of the airframe in order to prevent damage when fitting or removing the fuse.

G 2.9 It is required that a tag or pennant is affixed to the fuse to aid removal and visibility.

G 2.10 Only one flight battery may be used per flying round.

G 2.11 A propeller spinner or rounded safety nut must be fitted on forward facing motors.

G 2.12 The allocated team number must be displayed on the upper wing surface of the aircraft in characters a minimum of 100mm high in a contrasting colour.

RADIO RESTRICTIONS

G 3.1 Radio control will be used to fly and manoeuvre the aircraft.

G 3.2 Equipment on the 2.4GHz band only.

G 3.3 A serviceable failsafe must be fitted that as a minimum returns the throttle to stop on loss or corruption of the radio signal.

G 3.4 Radio installations will be scrutinised by the organisers and must be deemed fit for the intended application.

G 3.5 Aids to flight stabilisation such as gyros and auto level are permitted but pilot authority must be maintained at all times.

FLIGHT COMPETITION

G 4.1 Time for trimming flights will not be available on the day of the competition except at CD's discretion where it is deemed advisable to conduct a test flight after repairing major damage incurred in an earlier round.

G 4.2 The extent of the flying area will be announced during the morning briefing, any pilot flying within the briefed "no fly" areas will be directed to land immediately.

G 4.3 The pilot of the aircraft should perform appropriate pre flight checks.

G 4.4 The number of flight rounds will be announced at the morning briefing to reflect the expected weather conditions and number of entries.

G 4.5 The distances indicated on the flight plan sheet are for guidance purposes only, these will be set and announced at the morning briefing to reflect the prevailing wind conditions and location on the airfield.

G 4.6 Pilots will be individually briefed regarding flight pattern and dead airspace on the flight-line prior to their first flight of the competition.

G 4.7 The flight-line controller has overall responsibility and authority for all matters relating to flight safety.

G 4.8 Pilots must be prepared to “ditch” their aircraft on the order of the flight-line controller should he deem it necessary on safety grounds.

PROTESTS

G 5.1 Any protest must be filed in writing to the Contest Director by the faculty advisor or team captain.

G 5.2 Any protest must be filed no more than 10 minutes after the Flight Competition is announced as being completed.

G 5.3 In order to have a protest considered a team must be willing to put up points specified in each Challenge, which may be forfeit, if their protest is not upheld.

G 5.4 The Contest Director may call upon a jury of interested parties to help with his decision.

G 5.5 The Contest Director carries the final vote in the event of a split decision.

LIST OF CONTENTS

- W 1 OBJECTIVES
- W 2 CONTEST ELIGIBILITY
- W 3 AIRCRAFT/POWER REQUIREMENTS
- W 4 RADIO RESTRICTIONS
- W 5 COMPETITION PROCEDURES
- W 6 DESIGN COMPETITION
- W 7 PRESENTATION
- W 8 SCRUTINEERING
- W 9 FLIGHT COMPETITION
- W 10 SCORING
- W 11 PRIZE AND AWARD DETAILS
- W 12 ENTRY DETAILS
- W 13 REPORTS AND DRAWINGS
- W 14 SCORING GRAPHIC
- W 15 ENTRY FORM

Competition resources supported by



<http://www.4-max.co.uk/bmfa-payload-challenge.html>

Visit their website to view materials for the 2023 Payload Challenges but it is important that you place your order either by telephone or email in order to receive the discounted payload challenge prices.

Quote **2023BMFA** for 10% discount on competition items.

Please note: the BMFA does not stock competition materials

W 1 OBJECTIVES

W 1.1 Contestants are to design and build a radio controlled aircraft using the specified design and equipment parameters, capable of carrying the specified **liquid** payload. They should design their aircraft to maximise the value of the ratio “payload/aircraft empty mass”. The aircraft empty mass is defined as the mass without payload, payload receptacle but with flight batteries.

W 1.2 Teams are required to produce a technical report describing their aircraft's design and construction together with design drawings. They then have to give a verbal presentation on their aircraft and finally take part in a flight competition aimed at verifying their performance predictions.

W 1.3 The flight competition will be judged on the basis of the achieved value of the “payload/empty aircraft mass” ratio.

W 1.4 The winners are the team who are judged to have scored the highest aggregate score for all aspects of the competition. Although normal course tuition and guidance is expected, the reports, drawings and the building of the aircraft are to be treated as though they are examination submissions and are to be the sole work of the students.

W 2 CONTEST ELIGIBILITY

W 2.1 The contest is open to all students in full time education including accredited apprenticeships (level 3, 4 6 or 7). Applications outside of this criteria will be considered on an individual basis.

W 3 AIRCRAFT/POWER REQUIREMENTS

W 3.1 The power system will comprise one 4-Max PO-3541-1070 motor and 4M-ESC50A speed controller and a 3 cell Lithium Polymer battery of 2200 mAh nominal capacity (supplied fully charged by the organisers for each round).

No modification to the motor or ESC is permitted.

W 3.2 The motor may be used as direct drive or fitted with the addition of a gearbox and propellers must be of fixed pitch.

W 3.3 The aircraft must include provision to carry the liquid payload, and this must consist of a removable container(s). Any type of receptacle can be utilised but consideration must be given to secure mounting and damping of payload in order that the aircraft centre of gravity is not significantly altered in flight. Empty payload receptacles must weigh no more than 10% of their filled mass.

W 3.4 The payload for the competition will be the total combined mass of the liquid and receptacles. Immediately after flying the payload must be presented at the weighing/scoring station with the appropriate flight card.

W 3.5 Be advised: Payload will be rounded down to the nearest 100 grams.

W 3.6 The recorded payload that is given by the organisers' scales will constitute the value that is used in scoring calculations for the competition.

W 3.7 In order to facilitate the calculation of the "payload/aircraft empty mass" ratio, the empty mass of each competing aircraft will be measured during scrutineering. The measured empty mass will be rounded up to the nearest 10 grams. The aircraft empty mass is defined as the mass without payload, payload receptacle but with all batteries. If during the flying competition it is necessary to make repairs to the aircraft, such repairs must not reduce the empty mass.

W 3.8 The aircraft undercarriage must enable operation from a grass runway.

W 3.9 Only batteries supplied by the organisers may be used for competition flights. Batteries will be fitted with XT 60 connectors (negative to pointed end)

W 4 RADIO RESTRICTIONS

W 4.1 Radio control equipment must be on the 2.4Ghz band.

W 4.2 Flight may be effected either autonomously or by radio control, where autonomous flight capability is utilised the systems used must make provision for the pilot in charge of the flight to regain full control of the aircraft by radio control at any phase of flight, it must be borne in mind that this is a legal requirement as well as a requirement of the competition rules. Teams utilising autonomous systems must satisfy the competition organisers that the above requirements can be complied with before autonomous flight is authorised.

W 4.3 The use of gyros/auto stabilisation is permitted, however any aids to stable flight must be able to be overridden by pilot command at any phase of flight.

W 4.4 Radio installations will be scrutinised by the organisers and must be deemed fit for the intended application.

W 5 COMPETITION PROCEDURES

W 5.1 There will be three elements to the challenge in which all participants are required to compete. The first, the design element, will enable the contestants to present their drawings, reports and designs which demonstrate their calculations in predicting the maximum payload that their aircraft will lift. Valuable points can be gained here!

The second, prior to the first competition flight, each team will present their aircraft design before a panel of professional engineers

The third, the flight element, will determine which aircraft can achieve the highest value for the "payload/empty aircraft mass" ratio

W 5.2 Each team must display their designated entry reference on the wing of the aircraft in characters a minimum of 100mm high in a contrasting colour. Aircraft not fulfilling this requirement will not pass scrutineering and processing.

W 6 DESIGN COMPETITION

Consider that you are compiling a technical document in support of a competitive tender. Compliance with the following directions will add credibility to your design proposal. Your team will earn more points if the data contained in the drawings corresponds to the values used and derived in your report.

DRAWINGS:

W 6.3 Each team must submit detailed drawings for the aircraft which is to be flown. The drawings must be to a standard that would permit a third party to construct a working airframe (it is acceptable for novel or complex construction techniques to be detailed in the report rather than on the drawings if necessary). The drawings must contain fully dimensioned front, end and plan elevations and wing section details. These must all be drawn to scale and with the scale shown. The plan view must contain a listing of all the relevant aerodynamic surface areas. Drawing minimum size is A3 and maximum size is AO, all sheets must be the same size. Materials and sizes are to be indicated. Detail drawings, which are deemed necessary to explain structure of the aircraft and the range of movement of the aerodynamic control surfaces, are also to be included.

Each drawing sheet will include the name of the team in the title box and the designated reference number.

W 6.4 Teams are to submit the drawing set by email in PDF format. The judges will evaluate the drawings based on a professional standard format. Areas of evaluation will include.

- Detail
- Completeness
- Explanation of structures
- Readability
- Graphical standards

W 6.5 A maximum of ten sheets of drawings are permitted. The drawings will be worth **50 points**.

REPORT:

W 6.6 Each team must submit a report which details the design philosophy, structural and aerodynamic design. The report should also include performance calculations and must quote a prediction of the maximum payload to be carried in the Flight Competition. Any original or innovative ideas should be described, together with the use of unique or advanced structural techniques and materials. The report is worth **50 points** and should comprise no more than 25 double-spaced, typewritten pages of A4 paper, including any appendices and diagrams. Minimum type size to be 12 point. Where an institution enters

more than one team, the designs, reports and drawings are to be produced by each team independently.

Each page of the report will include the name of the team in the footer or header. If a report exceeds 25 pages only the first 25 pages will be marked. If a cover or front sheet is used it will not be included in the total number of sheets. As per the drawings, the report may be submitted in PDF format.

W 6.7 Copies of all drawings and reports are to be sent to both judges at least 30 days prior to the start of the flight competition (do not send them to the competition director).

W 6.8 Late submissions will be penalised and competitors are advised that, in these circumstances, the judges' comments may be less carefully considered. The organisers are not responsible for lost/misdirected drawings/reports, please ensure that you request an acknowledgement Email when you submit your team's information and do not assume that your Email has arrived if you do not receive this. Hard copy drawings can be returned on request.

W 6.9 Although normal course tuition and guidance is expected, the reports, drawings and the building of the aircraft are to be treated as though they are examination submissions and are to be the sole work of the students.

NOTE: The drawings/reports form an important opportunity to gain points, ensure that all submissions are compliant with the rules and submitted on time in order to avoid penalties.

W 7 PRESENTATION:

W 7.1 Prior to the first competition flight, each team will present their aircraft design before a panel of professional engineers.

W 7.2 Order of presentation will be established by the organisers and announced at the start of the competition.

W 7.3 Each team will be allocated five minutes in which to describe and promote their design, content falling outside of the allocated time will not be considered during marking.

W 7.4 Visual aids will not be permitted, however teams may utilise material/test samples, aircraft cross section samples and replica components as part of the presentation to judges. The aircraft should be available for the presentation and a **10 point** penalty will be incurred if the complete aircraft does not feature as part of the presentation. The presentation is worth **30 points**. Judging criteria for the presentation will include:

- Balance and continuity
- Articulation
- Technical highlights

NOTE: Experience has shown that teams do not make the best use of the opportunity to gain the additional points that the presentation offers, remember,

your team's presentation should aim for a professional standard and "sell" the benefits of your particular design to the maximum.

This competition is as much a test of your organisational skills as of your engineering flair. You may well have a world-beating design....on paper. Each year several teams fail to complete their projects by the date of the Flight Competition.

W 8 SCRUTINEERING

W 8.1 Aircraft details will be recorded, this will include a physical check of the critical dimensions and features, a safety and airworthiness inspection will also be conducted at this time to enable teams to address any item requiring attention before flight.

W 8.2 All payload receptacles must be made available to the scrutineers.

W 8.3 Correct Failsafe operation must be demonstrated at this time so the transmitter and a flight battery must be available to conduct the demonstration (note: Failsafe = a system whereby the throttle moves to the closed position if the receiver experiences any external interference or loss of signal).

W 9 FLIGHT COMPETITION

W 9.1 First Round: Each aircraft is required to complete a flight (*Take off, circuit and landing in accordance with W 9.10 – 9.12*) without any payload or payload receptacle. Successful completion of this qualification round is essential before a payload scoring round can be flown. **30 points** awarded for a successful qualification flight.

W 9.2 Second Round: Each aircraft is required to complete a flight carrying a maximum payload of 2.0 kg. The payload can exceed 2.0 kg, but only 2.0 kg will score.

W 9.3 Third Round: Each aircraft is required to complete a flight carrying a maximum payload of 4.0 kg. The payload can exceed 4.0 kg, but only 4.0 kg will score.

W 9.4 A team which has successfully completed the qualification flight at the second attempt (ie; during the Second Round) may attempt the full 4.0 kg lift in the Third round.

W 9.5 Payload is measured in 100-gram increments. Contest directors will verify the payload once a successful flight has been made. The team captain or his appointee will be present at the official weighing after each flight. The payload recorded will be: (Total mass of water plus receptacle) rounded down to the nearest 100 grams)

W 9.6 During each round of the flight competition, the team will have a defined period on entering the Start-up Box in which to complete their flight. A score will only be recorded if the aircraft completes its required flight pattern and lands within the designated touch down area within the allotted period.

W 9.7 Completion of a scoring flight will be recorded as the time at which the main wheels touch down for the last time prior to landing roll. It will be judged by the Contest Director

or his appointee. A team may make any number of flight attempts within the defined period which is allotted to them, but it is the final attempt which is the one that scores. i.e. a second attempt invalidates any score from a previous attempt in that round of the competition. An attempt is deemed to have begun when the aircraft begins its take-off roll. W 9.8 At the end of the defined period the team will leave the Start-up Box and may not return until their next flying slot.

W 9.9 The aim is for each team to fly three six minute slots. However, a final decision will be announced at the morning briefing to reflect the time available, the number of teams competing and the expected weather conditions.

W 9.10 The aircraft must take off from a stationary start within the designated runway and, be airborne before passing pylon one. It must then fly two circuits (either left-hand or right-hand, according to the prevailing conditions), and touch down within the designated landing area.

W 9.11 During the second circuit, the aircraft is required to perform an additional 360-degree turn in the opposite direction to demonstrate manoeuvrability and control.

W 9.12 The aircraft must take off and land with all of the same parts to receive any flight score. No jettisoning; deliberate or otherwise, is permitted. (Damage to propeller, wheels or undercarriage is permitted)

W 9.13 The original design of the aircraft as presented in the Design Competition may not be altered during the course of the competition, but it may be repaired. All repairs to be checked by the scrutineering team before flight.

W 9.14 For protest information see General Rules but in this category the team will need to put up 30 points.

W 10 SCORING

Overall score =

Drawings score	(max. 50)
+ Report score	(max. 50)
+ Presentation score	(max. 30)
– Penalties (See next para.)	
+ Normalised Total Flight Score	(max. 100)

Penalty points are assessed as follows:

- **2 points** deducted for each day or part day late in delivery of plans or reports
- **30 points** for unsuccessful protest.

W 10.1 Subject to weather conditions and time constraints for the event, 3 rounds will be flown by each team:

W 10.2 First round will be with NO PAYLOAD CARRIED. A score of 30 points is awarded for this qualification flight. Teams who record a “No Fly” can make a second and third attempt at qualification during the subsequent rounds.

W 10.3 Second round will be with a maximum payload of 2.0 kg. (Note that the actual payload carried should marginally exceed this value to avoid rounding down at the weigh-in). **See note in W9.4.**

W 10.4 Third and final round will be flown with a maximum payload of 4.0 kg.

W 10.5 The payload round scores are calculated from the formula in W14, these are added together with the qualification score to give the Total Flight Score for the flying competition (the total flight score will be normalised, 100 points will be awarded to the team with the highest total flight score, all other teams scores will be calculated as a percentage of this figure).

Challenge 5: Weight Scoring

Report

Maximum 25 A4 sheets, (including cover sheet) double-spaced, PDF format.

Category	Points Available	May include, but not be limited to...
Design Philosophy of the aircraft	8	Aircraft specification, Initial Sketches, concept development, project timeline, resource management.
Aerodynamic design, stability and control.	10	Basic sizing and design point, Wing and power loading, static margin, control power, aerofoil selection. If theoretical methods are used (eg CFD) state how these were used to influence the final design.
Performance	8	Take-off distance, rate of climb, turn radius, stalling speed, cruise speed etc. should include an estimation of the maximum payload to be carried.
Structural Integrity	16	Flight Envelope (g and speed) , Shear force and Bending moment diagrams, Wing strength estimation, validated with structural testing. Include structural techniques and material allowable stresses. If computational methods are used state the conclusions and relevance to the design.
Readability	8	Logical progression of detailed analysis, clear and relevant diagrams, credible results of calculations, attention to grammar and spelling, team ident shown in header or footer.
Total Max Points	50	

Drawings

Maximum 3 sheets PDF Format

Category	Points Available	The judges would like to see:
Detail	10	3 clear views of plan, side and front elevation. Include all template outlines or dimensioned profiles of ribs, frames etc. Include a section through the root wing chord, showing spar size and locations to permit structural assessment.
Completeness	10	Include dimensions for span, length, CG location. Indicate extent of control surfaces, payload provision and R/C gear location. Use a bill of materials or table of parts. Sufficient detail should be provided for a duplicate airframe to be constructed.
Explanation of structures	10	Use section views to reveal crucial internal features. Avoid unnecessary isometric views without dimensions or notes attached. Show payload provision and access features.
Readability	10	Logical progression of explanatory notes. Arrows, labels and part IDs to be unambiguous. Where section arrows are used, indicate sheet and grid ref. to locate views.
Graphical standards	10	Neat outlines, clear text, fine leader lines and uncluttered dimensions. Standardised bordered sheet with reference grid and title block.
Total Max Points	50	

Presentation (5 minutes)

Category	Points Available	The judges would like to know:
Balance and Continuity	10	Each team is to describe the design of their aircraft. Include any interesting features, especially weight saving and payload placement. Avoid repeating the content of your report and consider this a sales pitch to promote your design. We like to see contributions from several team members. Tell us how the design progressed, what changed and what has been achieved, how could the design be improved?
Articulation	10	
Technical Highlights	10	
Total Max Points	30	

Flight Competition

	Round starts	End of round time	Flight Score
	Successfully take off, perform tasks as outlined in weight challenge rules and land safely.	6 minutes round time	
Round 1	* Qualification round. No payload carried.		30
Round 2		2kg max Payload.	$Flight_Score = \frac{Payload_Carried}{Empty_Aircraft_Mass} \times 80$
Round 3		4kg Max Payload	$Flight_Score = \frac{Payload_Carried}{Empty_Aircraft_Mass} \times 80$

** If a team fails to complete the qualification round, subsequent attempts to gain 30 points can be made in round 2 and round 3, no payload can be carried until the qualification has been achieved.*

Normalisation of flight scores

Upon completion of all three rounds, the flight scores are added together.
The team with the highest aggregate score is awarded **100** points.
All other scores are calculated as a percentage of this figure.

Summary

Report	Max possible score	50 points
Drawings	Max possible score	50 points
Presentation	Max possible score	30 points
Normalised flight score	Highest aggregate flight score.	100 Points
Penalty 1	Late Report and/or drawings	-2 points per day
Penalty 2	No aircraft at presentation	-10 points
Penalty 3	Protest not upheld	-20 points

W 11 PRIZE AND AWARD DETAILS

1st Place

The 2023 Heavy Lift Challenge will reward the winning teams with the following.

The Integro Heavy Lift trophy *

£250.00 Cash prize, paid to university department or school.

£50.00 Cash prize, paid individually to each team member (up to a limit of five persons)

Certificates will be awarded to all competitors.

* Note: the Integro Heavy Lift Trophy is presented to the winning team on an annual basis and remains the property of the British Model Flying Association. The trophy must be returned 28 days prior to the competition of the following year in order that it is available to present at the event.

W 12 ENTRY DETAILS

PLEASE SEND ALL YOUR COMPLETED ENTRY FORMS TO THE CHALLENGE ADMINISTRATOR AT:

Challenge Administrator
The British Model Flying Association
BMFA National Centre
Sewstern Lane
Sewstern
Nr Grantham
NG33 5RW

Or by email marked for the attention of the Challenge Administrator (Lisa McDade) at lisa@bmfa.org

To facilitate planning, we must receive, by 1st April 2023, a formal notification of your intent to enter the 2023 competition and also payment of the appropriate entry fee.

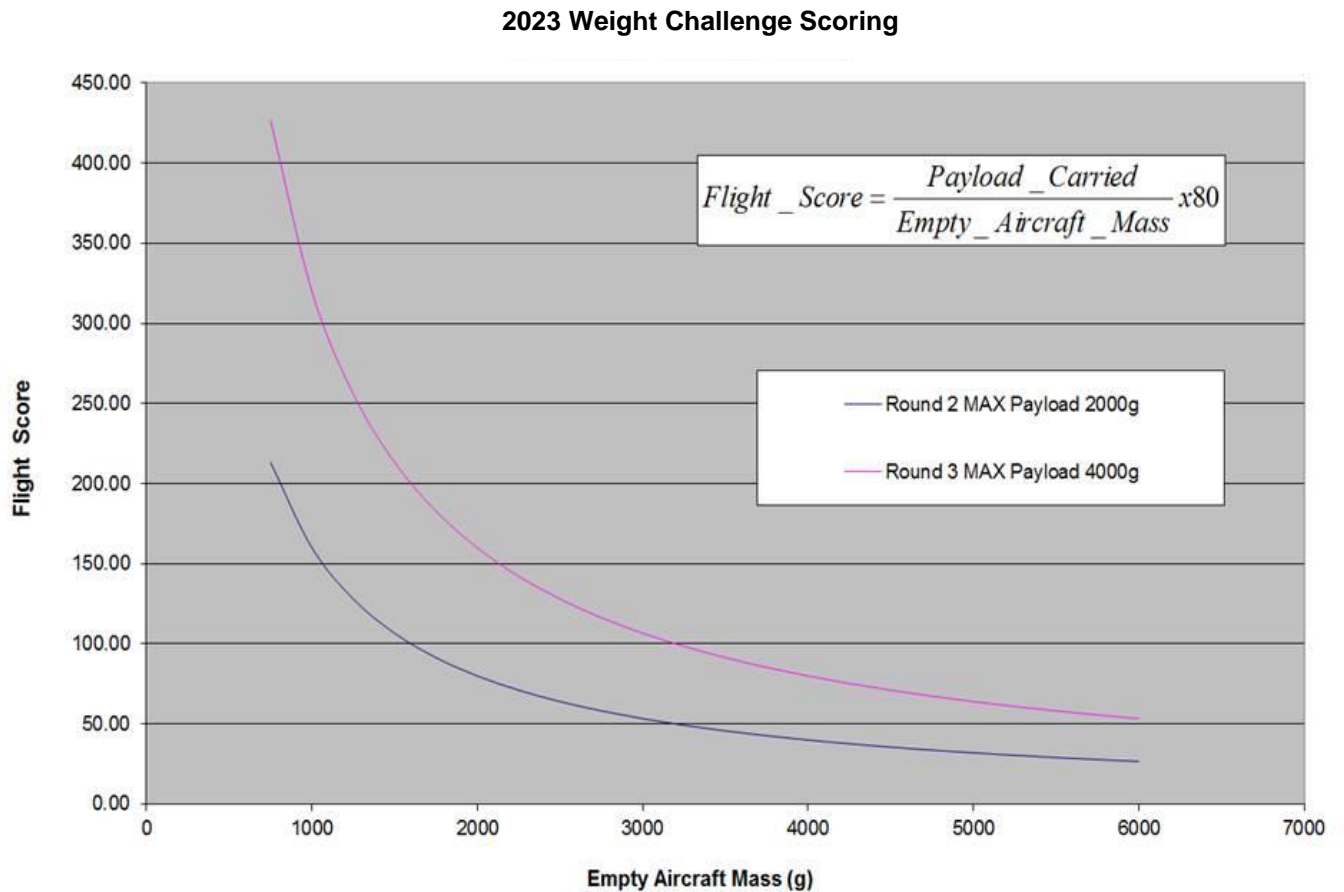
W 13 REPORTS AND DRAWINGS

All reports and drawings must be submitted at least 30 days prior to the day of the flying competition, late submission will be penalised as described previously.

Material should be e-mailed to the Challenge Administrator:

lisa@bmfa.org

W 14 SCORING GRAPHIC



Entry form for 2023 Payload Challenge 5 Weight

Note: Please copy this form and complete one form per team.

Forms to be received by 1st April 2023

Name of University, School, youth group or organisation:

Name of Tutor/Teacher responsible for entry: _____

Team Name: _____

Names of 5 Team Members:

1. _____

2. _____

3. _____

4. _____

5. _____

Pilot: _____

Name and Address of Team Manager

Name: _____

Address: _____

Contact Number: _____

Email: _____

All correspondence relating to the 2023 Challenge will be conducted through the addresses and numbers given on this form

Do you require technical assistance from local aeromodellers? YES / NO

Do you require a pilot? YES / NO

Please note a fee of £125.00 is payable per Team entered (non refundable).

Cheque to be made payable to BMFA or alternatively to pay by credit/debit card please contact the Lisa on 0116 2441085.

Cheque enclosed

☐

Challenge Administrator
British Model Flying Association
BMFA National Centre
Sewstern Lane
Sewstern
Nr Grantham
Lincolnshire
NG33 5RW

Please note on receipt of completed Entry Form and payment each team will be issued with a unique reference number which must be quoted in all correspondence including submissions to the judges and also displayed on each aircraft as detailed in the Rules Brochure.

Office Use Only

Payment Received: ☐ Date: _____ Signature: _____

Reference Number: _____