

Institution of
**MECHANICAL
ENGINEERS**



Prifysgol Cymru
Y Drindod Dewi Sant
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REGIONAL DESIGN CHALLENGE 2017

REPEATABLE 'VEHICLE'

INTRODUCTION

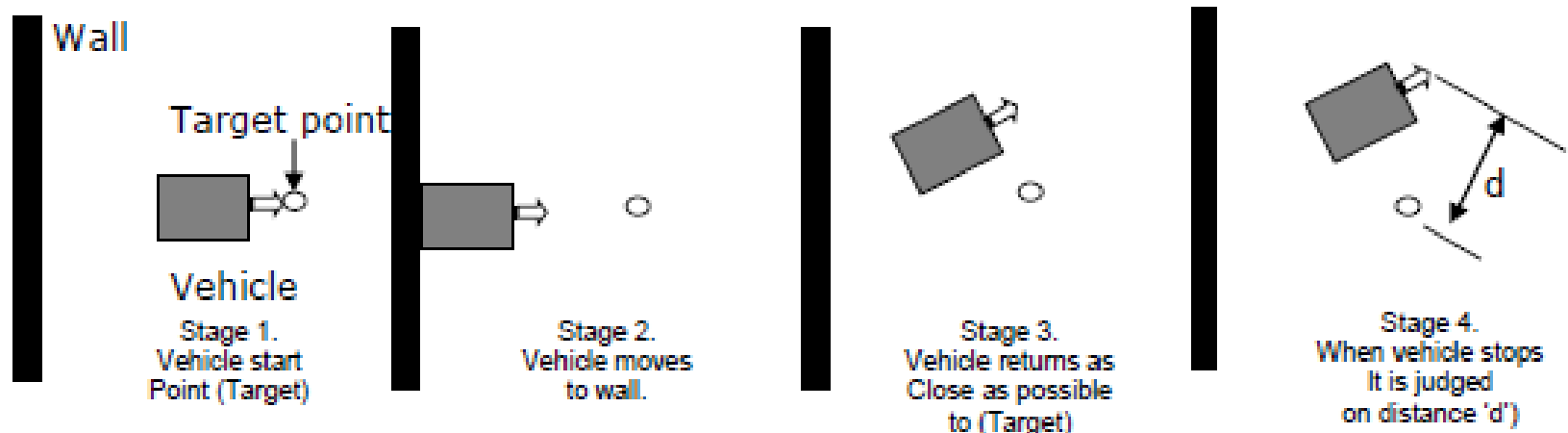


Figure 1. Schematic of the competition (not to scale; 'vehicle' does not have to be as shown).

INTRODUCTION

The challenge will be in four parts, each part will be awarded separate prizes.

- 1. Work in teams** to design, build and test a vehicle to compete with other teams
- 2. Produce a poster and design report** to publicise the teams' work. The poster is a demonstration of the team's ability to sell their design solution. The report will need to explain the contribution of each member of the group.
- 3. Give a short presentation** explaining the design and development of the device to demonstrate verbal and presentational skills.
- 4. Submit a peer review** where all students have the chance to vote for the best engineered solution to the problem.

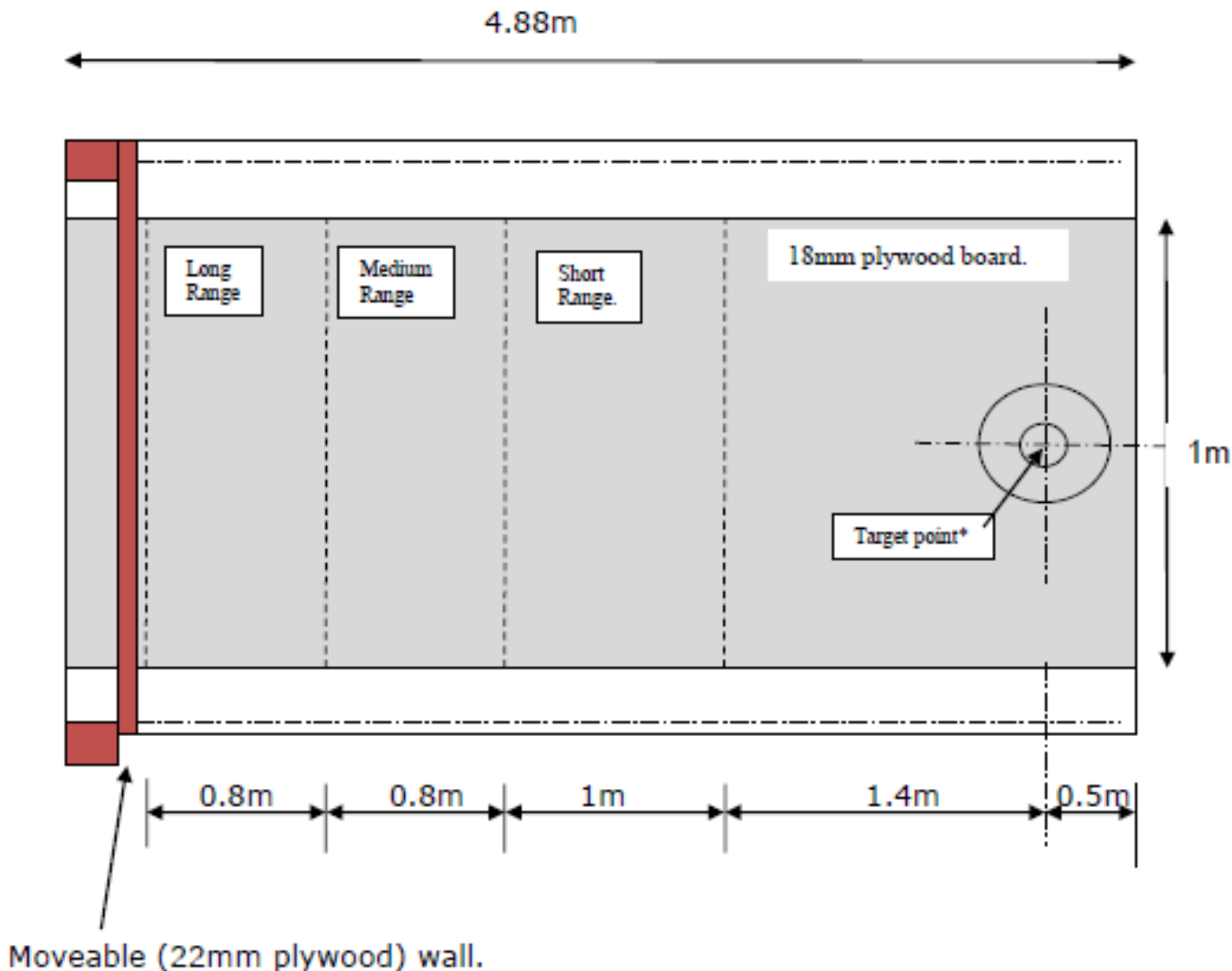
COMPETITION RULES

2.1 The 'vehicle'

- Type
- Remote Controls
- Navigation

2.2 The Lane and Wall

- flat / horizontal
- 0.3m heavy and rigid

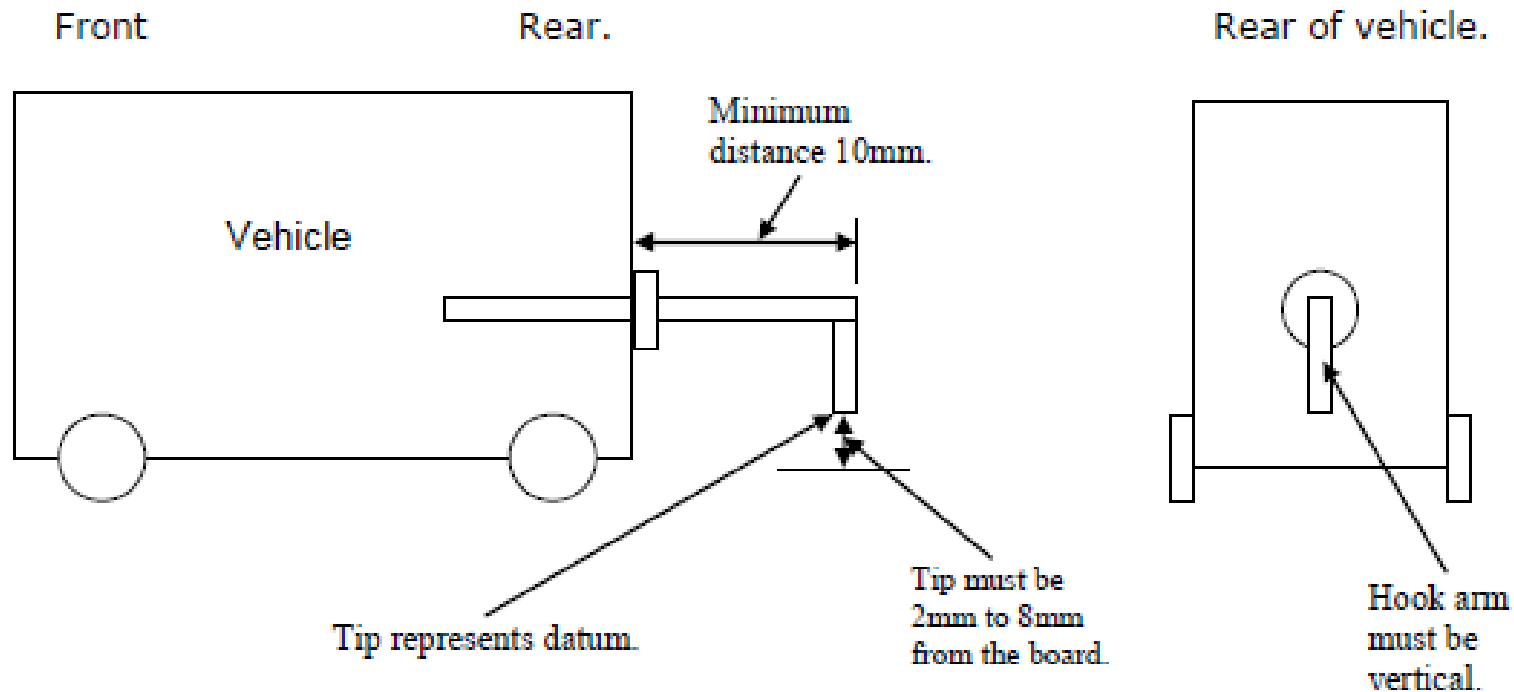
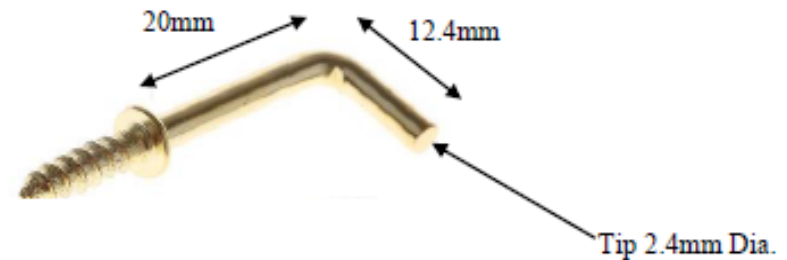


COMPETITION RULES

2.3 Control Methods

2.4 Electrically operated vehicles

2.5 The final position of the vehicle



COMPETITION RULES

2.6 The Heats and Ranges

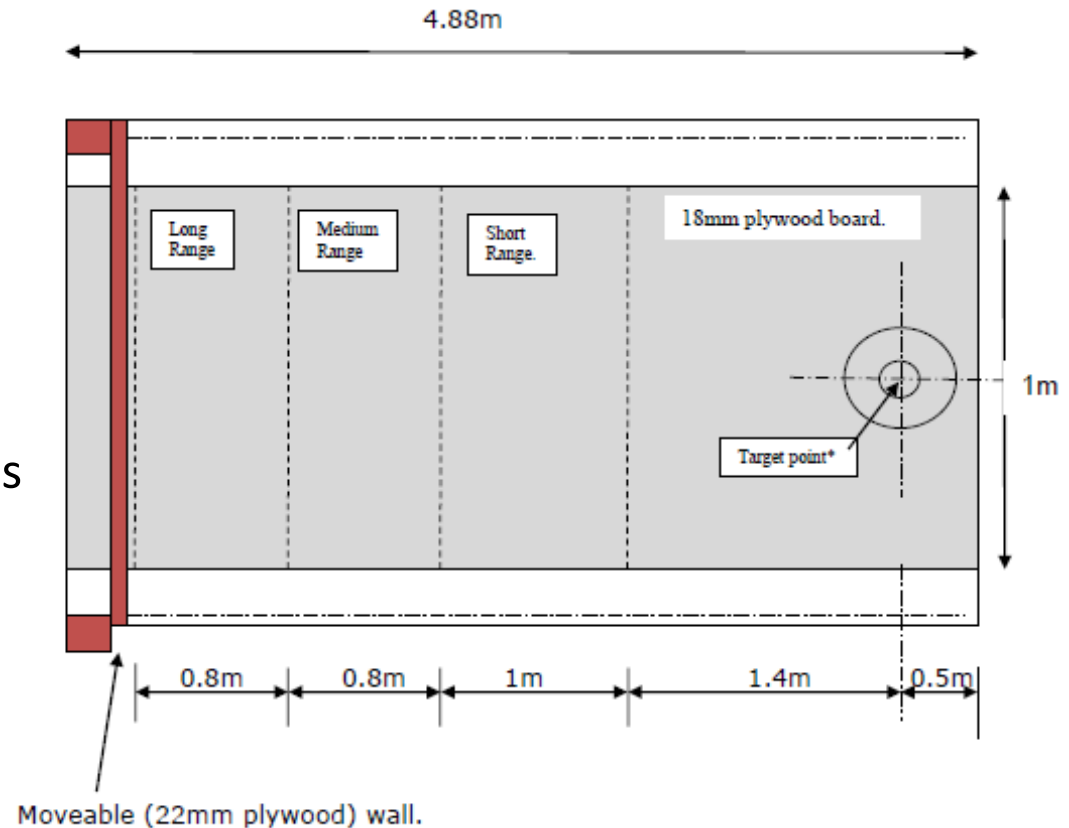
- Same for all teams,
- not known in advance

2.7 Scoring

- Sum of three single runs

2.8 Accuracy not speed.

2.9 Team members position



COMPETITION RULES

2.10 – Zero points if.....

- Do not reach wall
- Leaves lane
- Run exceeds 3 mins
- Non compliance with rules
- Failure to stop within target area
- Disqualification (1 run)

2.11 Repairs and Alterations

2.12 Tie results

