



# Health & Safety Risk Assessment

|                  |   |
|------------------|---|
| <b>Reference</b> | Competitions  |
| <b>Location</b>  | Competition Venues  |
| <b>Activity</b>  | UKMARS robot contests including Line Following, Drag Racing, Wall Following and Maze Solving. |

| Record of Reviews     |                   |                 | Likelihood and Severity Ratings and Guidance |                              |                        |                 |
|-----------------------|-------------------|-----------------|--|------------------------------|------------------------|-----------------|
| Date Review Completed | Reason for Review | Risk Assessor   | Severity Rating (SR)                         |                              | Likelihood Rating (LR) |                 |
| 14/02/2023            | First Assessment  | Ian Butterworth | 1  | None                         | 1                      | Highly Unlikely |
|                       |                   |                 | 2  | Minor Injury or illness      | 2                      | Unlikely        |
|                       |                   |                 | 3  | Over 7 Day Injury or illness | 3                      | Possible        |
|                       |                   |                 | 4  | Major Injury or illness      | 4                      | Likely          |
|                       |                   |                 | 5  | Fatal                        | 5                      | Highly Likely   |
|                       |                   |                 |  |                              |                        |                 |
|                       |                   |                 |  |                              |                        |                 |
|                       |                   |                 |  |                              |                        |                 |
|                       |                   |                 |  |                              |                        |                 |

| Risk Evaluation Matrix   |   |                    |           |           |            |            |
|--------------------------|---|--------------------|-----------|-----------|------------|------------|
| P x S = Risk             |   | Severity (Outcome) |           |           |            |            |
|                          |   | 1                  | 2         | 3         | 4          | 5          |
| Probability (Likelihood) | 5 | 5<br>Mod           | 10<br>Mod | 15<br>Sig | 20<br>High | 25<br>High |
|                          | 4 | 4<br>Low           | 8<br>Mod  | 12<br>Sig | 16<br>high | 20<br>High |
|                          | 3 | 3<br>Low           | 6<br>Mod  | 9<br>Mod  | 12<br>Sig  | 15<br>Sig  |
|                          | 2 | 2<br>Low           | 4<br>Low  | 6<br>Mod  | 8<br>Mod   | 10<br>Mod  |
|                          | 1 | 1<br>Low           | 2<br>Low  | 3<br>Low  | 4<br>Low   | 5<br>Mod   |

|                               |   |
|-------------------------------|---|
| <b>High</b><br>16 - 25        | <b>High Risk - Unacceptable</b><br>Control measures must be introduced to reduce the degree of risk prior to the activity/ process proceeding.                                      |
| <b>Significant</b><br>12 - 15 | <b>Significant Risk – Priority Action Required</b><br>Immediate review of controls must be undertaken, interim controls may be necessary in order for activity/process to continue. |
| <b>Moderate</b><br>5 - 10     | <b>Moderate Risk - Tolerable</b><br>Activity/process can continue, but additional controls may need to be introduced to further reduce the risk prior to start of task              |
| <b>Low</b><br>1 - 4           | <b>Low Risk - Acceptable</b><br>Risk is being adequately controlled; but further control measures may further reduce the risk.  |

## Health & Safety Risk Assessment

| Hazard                    | Who Might Be Harmed        | Existing Control Measures (if any)   | Initial Risk Rating |    |            | Additional Control Measures (if required)  | Final Risk Rating |    |            |
|---------------------------|----------------------------|--|---------------------|----|------------|--|-------------------|----|------------|
|                           |                            |  | SR                  | LR | Risk Level |  | SR                | LR | Risk Level |
| Trips and Slips           | Spectators and Competitors |  | 2                   | 3  | 6          | All attendees made aware that there are a number of tracks and timing gear on the floor. People to look out and not run. | 2                 | 2  | 4          |
| Soldering and maintenance | Competitors                | All competitors construct their own robots and are aware of safe practice. Under 18s are accompanied by a responsible adult.   | 2                   | 2  | 4          |  | 2                 | 2  | 4          |
| Electrical shock          | Spectators and Competitors | Mains powered equipment in the competition area is subject to formal visual inspection and if over 3 years old subject to PAT. | 3                   | 1  | 3          |  | 3                 | 1  | 3          |
| Electrical shock          | Competitors                | Competitors own equipment subject to their own safety checks.  | 3                   | 2  | 6          | Remind competitors to visually check mains powered equipment before connecting to the supply.                            | 3                 | 1  | 3          |
| Moving robot              | Spectators                 | Competitions are supervised by UKMARS timekeepers keeping spectators away from moving robots.                                  | 2                   | 2  | 4          | Remind competitors to take care when performing practice runs.   | 2                 | 1  | 2          |



## UKMARS

# Health & Safety Risk Assessment

| Hazard                | Who Might Be Harmed        | Existing Control Measures (if any)   | Initial Risk Rating |    |            | Additional Control Measures (if required) | Final Risk Rating |    |            |
|-----------------------|----------------------------|--|---------------------|----|------------|---|-------------------|----|------------|
|                       |                            |  | SR                  | LR | Risk Level |   | SR                | LR | Risk Level |
| Moving Robot          | Competitors                | Competitors familiar with safely operating their own robots. Under 18s are accompanied by a responsible adult.   | 2                   | 1  | 2          |   | 2                 | 1  | 2          |
| Fire Emergency        | Spectators and Competitors | At the start of the event all attendees are briefed on Emergency Procedures and the location of escape routes.   | 3                   | 1  | 3          |   | 3                 | 1  | 3          |
| Abuse of under 18s    | Spectators and Competitors | All under 18s have an identified responsible Adult for safeguarding. Safeguarding controls are implemented by the Parents/School/Club in accordance with their risk assessment. Attendees are advised in advance if there are non-binary toilets or other facilities that need to be included in their risk assessments. |                     |    | n/a        |   |                   |    | n/a        |
| Coronavirus Infection | Spectators and Competitors | National guidelines and instructions are followed. There are no additional risks introduced by the activities of the event.  |                     |    | n/a        |   |                   |    | n/a        |
|                       |                            |  |                     |    |            |   |                   |    |            |

## Health & Safety Risk Assessment

| <b>Action Plan</b>      |  |                     |                              |
|-------------------------|--|---------------------|------------------------------|
| <b>Risk or Activity</b> | <b>Additional Controls and Actions required</b>  | <b>Action Owner</b> | <b>Target Date</b>           |
| Trips and Slips         | All attendees made aware that there are a number of tracks and timing gear on the floor. People to look out and not run. | Chairman            | Event date.                  |
| Electrical Shock        | Remind competitors to visually check mains powered equipment before connecting to the supply.                            | Chairman            | When entries are registered. |
| Moving robot            | Remind competitors to take care when performing practice runs.   | Chairman            | When entries are registered. |
|                         |  |                     |                              |

|                  |                        |
|------------------|------------------------|
| <b>Name</b>      | Ian Butterworth        |
| <b>Position</b>  | Chairman               |
| <b>Signature</b> | <i>Ian Butterworth</i> |
| <b>Date</b>      | 14/02/2023             |