Activity	Student Robotics Kickstart	**Location**	Highfield Campus - South		**Likelihood**	**Likelihood rating**	**Severity**	**Severity rat**	**Risk rating**	**Category**	**Tolerability**	**Comments**
			Start	**End**	Very unlikely	1	First Aid injury/illness	1	1-2	Very low	Acceptable	No further action is necessary other than to ensure that the controls are maintained.
Assessors	Jake Howard	**Event dates**	08/11/25	08/11/25	Unlikely	2	Minor injury/illness	2	3-4	Low	Acceptable	No additional controls are required unless they can be implemented at very low cost (in terms of time, money and effort).
Date assessed	29/10/2025				Likely	3	'3 day' injury/illness	3	5-7	Medium	Tolerable	Consideration should be given as to whether the risks can be lowered, where applicable, to a tolerable level, and preferably acceptable level, but the costs of additional risk reduction measures should be taken into account. The risk reduction measures should be implemented within a defined time period.
					Fairly likely	4	Major injury/illness	4	8-14	High	Tolerable	Substantial efforts should be made to reduce the risk. Risk reduction measures should be implemented urgently within a defined time period and it might be necessary to consider suspending or restricting the activity, or to apply interim risk control measures, until this has been completed. Considerable resources might have to be allocated to additional control measures.
					Very likely	5	Fatality/disabling injury	5	15+	Very high	Unacceptabl	Substantial improvements in risk control are necessary, so that risk is reduced to a tolerable or acceptable level.

Who is at risk	**Description**
Competitors	A competitor (16-19 year old) who is involved in the risk activity
Team Supervisors	A named Team Supervisor (responsible adult) for the team who is involved in the risk activity
Volunteers	Someone working on behalf of Student Robotics who is involved in the risk activity
Third Parties	Someone not involved in the risk activity. This may include competitors, team supervisors, volunteers, or event visitors.

Hazard	**Description**	**Who is at risk**	**Likelihood**	**Severity**	**Risk Factor**	**Controls**	**Likelihood**	**Severity**	**Risk factor**	**Responsible person**
Injury while using manual or power tools	Inappropriate use of tools resulting in tools slipping and/or breaking and thereby injuring the user or those nearby.	Competitors Team Supervisors Third Parties	2	3	6	Tools should only be used when appropriate and in the manner they are designed to be used. Team Supervisors to supervise all tool use by teams. All use by Volunteers should be by a competent adult. Loose hair or clothing to be tucked in or removed whilst operating tools. Teams reminded in advance that they should provide their own safety gear along with tools. Student Robotics will not provide any tools to Competitors. Safety gear may be provided.	2	2	4	Team Supervisors SR Event Coordinator
Interaction with robots: electric shock	Robots operate from battery power, and outputs can be enabled/disabled autonomously. Mishandling of the battery, circuitry, or wiring can result in an electric shock and potential burns. Mishandling the battery can be severe due to the high current capacity of the battery, the wiring in the kit has potential for harm reduced due to the kit providing current limiting.	Competitiors Team Supervisors Volunteers	2	4	8	Team Supervisors to supervise work on robots in their working area. Robots must be powered down and placed within the team pits if left unsupervised. Robots must be powered down when being inspected or handled by a volunteer. Robots are required to provide a housing for the battery to protect it from mechanical damage. This may be being developed at the event, so may not always be complete. Robot wiring is to be kept away from moving parts to prevent damage. The battery must connect only into the Student Robotics Power Board which is capable of cutting the power off from the rest of the robot. A readily available and obvious power off button connected to the Student Robotics Power Board must be accessible from the top of the robot. Additional power sources used on the robot must be approved beforehand, and must provide an easy and safe cutoff mechanism. All voltages within robots to be within SELV limits (120VDC, 50VAC maximum). Teams will be required to rectify any potentially dangerous areas of their robots. Food and drink to be stored in sealed containers.	1	4	4	Team Supervisors SR Event Coordinator
Interactions with robots: burns	Parts of the robot heat up due to electrical energy dissipation or friction. This might result in a minor burn on the skin.	Competitors Team Supervisors Volunteers	2	3	6	All Student Robotics circuit boards are housed in a protective casing. Team Supervisors to supervise work on robots in team pits. Robots must be powered down and placed within the team pits if left unsupervised. Volunteers should inspect a robot to identify any potential risks before handling. Robots must be powered down when being inspected or handled by a volunteer unless necessary, in which case the robot must be inspected for risks prior to handling. Power outputs from the Student Robotics kit are limited.	1	3	3	Team Supervisors SR Event Coordinator
Interaction with robots: other injuries	Robots are constructed by competitors and can have sharp edges. Also the robots are constructed with moving parts, often powered autonomously, which can result in cuts or limbs being crushed. Due to the typical low power of the robots cuts are likely to be minor and crushing likely to result in little more than bruising.	Competitors Team Supervisors Volunteers Third parties	4	2	8	Team Supervisors to supervise work on robots in team pits. Robots must be powered down and placed within the team pits if left unsupervised. Volunteers should inspect a robot to identify any potential risks before handling. Robots must be powered down when being inspected or handled by a volunteer unless necessary, in which case the robot must be inspected for risks prior to handling. A readily available and obvious power off button connected to the Student Robotics Power Board must be accessible from the top of the robot. Additional power sources used on the robot must be approved beforehand and must provide an easy and safe cutoff mechanism, obvious and accessible from the top of the robot. Teams will be required to rectify any potentially dangerous areas of their robots.	2	1	2	Team Supervisors SR Event Coordinator

Injury to Competitors, SR Volunteers, and Visitors due to unsafe robots	Robots may behave in unsafe ways, either inherently or due to performing something typically safe but in inappropriate circumstances. Examples include a sharp edge being exposed, or a projectile being launched towards observers.	Competitors Team Supervisors Volunteers Third parties	3	2	6	Anyone identifying a potential safety issue to report it to Volunteers who will seek to rectify it. Power cut off switch to be readily accessible on robots.	1	1	1	Team Supervisors SR Event Coordinator
Electric shock from battery sources	Unsuitable use of battery powered equipment, or the use of damaged battery powered equipment or cabling, resulting in low voltage (<120VDC, <50VAC) electric shock	Competitors Team Supervisors	3	3	9	All powered equipment to be used when appropriate and in the manner they are designed to be used. Damaged equipment to be retired from use. No wires to be exposed on batteries or chargers.	1	3	3	Team Supervisors SR Event Coordinator
Electric shock from mains sources	Unsuitable use of mains equipment, or the use of damaged mains equipment or cabling, results in a high voltage high current electric shock	Competitors Team Supervisors Volunteers Third parties	2	4	8	Mains equipment and cabling to be appropriately rated, fused, and PAT tested. All powered equipment to be used when appropriate and in the manner they are designed to be used. Mains cabling to kept off the floor in regular and high use walkways. Mains cabling to be secured down and inspected at intervals for damage. All Student Robotics mains equipment used to be visually inspected before use. Damaged equipment to be retired from use.	1	4	4	Team Supervisors SR Event Coordinator
Injury from improper manual handling	Improper handling technique, or moving of equipment with insufficient people results in the individual handling causing personal injury. Handling of equipment unsafe for manual handling resulting in cuts or other physical injury. Nearby third parties getting injured by moving equipment, or crushed by dropped equipment.	Competitors Team Supervisors Volunteers Third parties	3	3	9	Team Supervisors to supervise their teams. Volunteers involved in manual handling briefed. Manual handling only performed within an individual's ability. Handling to be broken down into managable chunks where possible and appropriate. Heavy equipment not to be moved in busy areas. Robots not to exceed 16kg.	2	2	4	Team Supervisors SR Event Coordinator
Slips, trips, and falls	Obstructions or liquids on the floor resulting in a person falling, potentially whilst carrying equipment. This can potentially result in bruises or broken bones.	Competitors Team Supervisors Volunteers	3	4	12	Extension leads secured down and inspected regularly. Cabling and equipment kept off the floor in regular and high use walkways. Team Supervisors to enforce teams keeping their pit areas tidy. Carrying of robots or large or heavy objects on the stairs to be kept to a minimum. Running is not permitted. Any identified slip or trip hazards to be signed and removed as soon as possible.	2	2	4	Team Supervisors SR Event Coordinator
Battery failure - smoke, fire	The lithium polymer (LiPo) batteries used within the robots have the potential if mistreated to ignite and become a self-sustaining fire. Smoke released from this combustion is potentially harmful if inhaled.	Competitors Team Supervisors Volunteers Third parties	1	5	5	All batteries to be charged in fire-proof bags. Robots to provide isolated enclosure for installed batteries to protect against crushing or puncturing damage. Competitors and Team Supervisors to be informed about safe use of the batteries and trained on safe handling of batteries and use of charger. SR Volunteers and Team Supervisors to identify batteries showing signs of damage or swelling and deliver to SR Volunteers for safe disposal.	1	3	3	Team Supervisors SR Event Coordinator
Accidents due to being under the influence of alcohol or drugs	Alcohol or drug induced poor judgement or erratic behaviour resulting in unknown accident causing injury to the individual under the influence or those nearby. Severity set to max level 5 due to unpredictability of what may happen.	Third Parties	2	5	10	Team Supervisors to supervise their teams. Alcohol consumption prohibited on site. Anyone under the influence of alcohol or illegal drugs will be escorted off site. Anyone under the influence of medication that impairs their judgement to be restricted from activities that may be consequently dangerous.	1	0	0	Team Supervisors SR Event Coordinator
Injury during fire evacuation	In the event of a fire, attendees may receive burns, or suffer smoke inhalation. The venue has requested we provide some minimal fire warden cover for the event.	Competitors Team Supervisors Volunteers Third parties	2	5	10	Volunteers will not undertake anything that puts themselves at risk. If a fire is discovered the nearest alarm will be activated. Number of attendees not to exceed maximum venue capacity. Register taken on arrival recording team TLA, number of Team Supervisors, and number of Competitors. At least 2 copies of this register should exist in separate locations. In the event of a fire this will be used to confirm everyone has been evacuated. Volunteers briefed and shown escape routes before the event. Escape route signage will be checked prior to the event to ensure it is obvious. Volunteers will guide attendees towards the nearest appropriate exit. Volunteers will check areas where safe to do, and encourage other attendees to leave the building. If they do not leave then the Volunteer will note the location and number of attendees there and evacuate themself. Volunteers will attempt to aid the evacuation of any participants less able to evacuate themselves, where safe to do so.	1	2	2	SR Event Coordinator
COVID-19	Attendees catching COVID-19 and becoming ill.	Third Parties	2	3	6	Anyone experiencing symptoms of COVID-19, or who has tested positive for COVID-19 in the 7 days beforehand asked to not attend. Hand sanitisation stations available throughtout and attendees encouraged to use them. Attendees reminded to be respectful of others personal space.	1	3	3	Team Supervisors SR Event Coordinator
Eye strain viewing presentation	Participants watching the presentation could strain their eyes if the presentation is on too small a screen or text is incorrectly sized/colored	Competitors Team Supervisors Volunteers Third parties	1	2	2	Presentation to be designed with accessibiltiy and ease of viewing in mind ensuring clear contrast and suitable sizing of images and text Presentation to be kept to reasonable length so participants aren't staring at a screen for too long Book a room with a large enough screen and seating for the presentation	1	1	1	Presenter

Safeguarding Incident	Competitors are under the age of 18 and volunteers or adults attached to teams may fall into the category of vulnerable adults	Competitors Vulnerable Adults	2	4	8	Safeguarding Lead to appoint a Safeguarding Officer who is responsible for handling incidents at the event All Volunteers to have read and understoof the SR safeguarding policy Responsible adult to be present and responsible for copetitors throughout the event If a young/vulnerable person arrives without a Team Supervisor we ensure there are at least two SR volunteers supervising student while we locate their responsible adult. If the responsble adult isn't going to turn up situation to be dealt with on a case by case basis. Refusing entry to a young/vulnerable person could lead them stranded in an unknown location	1	4	4	Safeguarding Officer Volunteers
Vehicle Collision with Pedestrian	Attendees may have to change building on campus which may require them to walk alongside or cross roads	Competitors Team Supervisors Volunteers Third parties	2	4	8	Rooms to be booked to minimise travel distance for attendees on foot Where walking between buildings is necessary Volunteers to direct attendees to take routes on proper pavements and using marked corssing points, ideally crossing where traffic is required to stop. Team Supervisors to walk with teams and ensure groups stick together	1	4	4	Organiser Volunteers
Getting Lost	Attendees unfamiliar with the campus may get lost	Competitors Team Supervisors Volunteers Third parties	3	2	6	Clear directions given to attendees to get them to initial venue Volunteers to guide attendees between buildings Familiarisation of building provided by Volunteers upon entering new buildings pointing out toilets and where majority of people will be Signage around venues to let attendees know where is off limit and directiosn to toilets etc.	1	2	2	Organiser Volunteers