

General Risk Assessment – Overnight Society Event

Date: 02/03/2023	Assessed by: Robotic Society	Approved by: Service Delivery Manager	Location: Engineering building A: <ul style="list-style-type: none"> • Ground Floor • First Floor • Second Floor • Makerspace 	Assessment ref no:	Review date: NA
Task / premises: <ul style="list-style-type: none"> • Event title and location/s: Engineering Building A ground, first and second floor for workstations and games/relaxation, Makerspace for practical work(limited access). • Describe the event and activities: HackABot overnight hackathon centred around hardware. Each task is assessed in their own specific RA, this document pertains to the overlapping requirements for all challenges. low risk practical work (e.g. soldering) until 10pm with staff supervision, software only from 10pm to 7am supervised by several members of staff. No attendees will be sleeping on the premises and attendees will be advised to either take the event in shifts or schedule sleep for the 10pm – 7am window where there is no lab work permitted. • Describe dates and times: 25th of March, 9:00am on Saturday to 15:00pm on Sunday 26th of March. 9:00 – 11:00 on the Saturday will be setup, with students arriving from 11:00 onwards. The main event will be from 12 Saturday till 13:00 on the Sunday with 13:00-15:00 for breakdown. • Describe key people involved: 100-200 UGs and PGRs from EEE, MACE, CS and Physics. At least 6 committee members will supervise at all times with an additional qualified GTA. Staff (Academics, Fellows, PDRAs) will also be on hand to supervise all out of hours (outside 9:00 to 17:00) workshop activities and provide suitable level of responsibility to cover the night shift. Security informed of event. • Food and drink: <ul style="list-style-type: none"> ◦ Dinner – Pizza from approved university suppliers covering all dietary requirements of the attendees in attendance. ◦ Breakfast – Cereal, fruit, and extras(TBC) with variety of options for both cereal and milk option. ◦ During event - tea, coffee, and water available. Snacks will be provided details of which TBC. • Event is run in collaboration with other university societies as well as supported by external sponsors. • List of guests who will be attending the event to be supplied a week before to TEAMS. 					
Supporting RA/Documents: <ul style="list-style-type: none"> • RA_2023_Hackabot_Mona_football • RA_2023_Hackabot_Bodge_Bot • HackABot_Itinerary_and_Rota 					
On-shift Contact Information: The on-shift staff member will vary based on the time. For this event, 24hr staff supervision will be implemented with GTA's supporting practical activities in the Makerspace during the hours of 12-22:00 Saturday and 07:00-12 Sunday. The planned shift pattern and contact numbers in the event of emergency are to be found in HackABot_Itinerary_and_Rota . This information will also be made available to all attendees.					

Activity	Hazard	Who might be harmed and how	Existing measures to control risk	Risk rating	Result
Staff and attendees on campus	Respiratory illness through close contact or the contact with surfaces which may have been contaminated by previous users	Staff and attendees Infection of respiratory illness	<ul style="list-style-type: none"> For the latest national advice and guidance, please visit the Government and NHS coronavirus sites. For the latest UoM advice and guidance on campus, please visit the Campus Management and Activity on campus sites. Staff and attendees to follow self-isolation rules found on NHS Self isolation site following themselves (or anyone they live with) experiencing coronavirus symptoms, including if they have been contacted by the NHS directly. Staff and attendees to follow UoM procedures found on Safety on campus site following themselves (or anyone they live with) experiencing coronavirus symptoms, , including if they have been contacted by the NHS directly. Staff and attendees to follow latest national advice and guidance on public transport found on the safer travel guidance for passengers site. Staff and attendees to follow Faculty COVID controls and procedures as communicated by the FSE Campus Management Group: <ul style="list-style-type: none"> FSE want everyone to continue to regularly use hand sanitiser and clean workstations/equipment using the materials provided. FSE strongly recommend that all continue to wear face-coverings whilst moving around indoors on campus (except in spaces where health and safety considerations determine otherwise). Strong recommendation to take up the vaccine if applicable 	LOW	A
Action in case of emergency	Fire Asphyxiation Burns Injuries	Staff and attendees Injury/burns/ death due to being caught in a fire or smoke inhalation	<ul style="list-style-type: none"> Dynamic assessment of risk shall be conducted throughout the event. Upon any significant change organisers and staff to assess if the event should be stopped or seek advice from approver - ACTION Organisers to receive full building induction arrangements cover security and fire awareness and include how to locate and use a fire door to exit the building and the location of the fire assembly point(s) delivered prior to the event by a member of TEAM - ACTION Organisers to then pass on basic induction to all attendees at the start of the event - ACTION 	LOW	

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			<ul style="list-style-type: none"> Fire alarm system are in place and tested weekly on day at time to enable users to identify the sound of the alarm, see fire action notice at entrance to buildings. Fire routes are kept clear during the event and any refuge placed in designated bins in the area to minimise combustibles in the area. Ready access to fire extinguishers is available for use by trained users. Organisers to act as evacuation marshals and assist staff during any evacuations, All organisers and Staff will be wearing a Purple shirt with organiser of Judge on the back to be clearly distinguished - ACTION Users are instructed and empowered to act if they suspect an emergency to activate the fire alarm to trigger evacuation of the building. Engineering A is not suitable for sleeping and all attendees must confirm they go home to sleep when needed. All attendees to ensure they alert organisers if they feel too tired to perform the activity. All attendees to be instructed where the nearest toilets are. Attendees must sign out in order to ensure all are accounted for, during and at the close of the event this will be situated at the south entrance to Engineering A. Exit via other entrances will not be permitted except in emergencies. Organisers will conduct a rollcall at the emergency meeting point to ensure all attendees have vacated the venue. 		
Attendees access to the makerspace	Attendees will be permitted to use all the facilities provided by the makerspace	Attendees Physical injury	<ul style="list-style-type: none"> All organisers will be required to be inducted on the use of the makerspace by one of the technicians before the event - ACTION. All attendees will be inducted in the proper use of the makerspace by the designated staff, GTA's and organisers. The makerspace will be attended by a member of staff, at least one GTA and a designated committee member to oversee the proper use of the equipment by all attendees. All activities are covered in the subsequent risks. The makerspace is limited to a maximum capacity of 50 students, there will be a member of committee stationed at the entrance to count attendees and ensure that they have complete a formal makerspace induction. 	LOW	A

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Attendees entering and leaving the building	Attendees will be permitted to enter and leave the building at any time and their whereabouts may become unknown	Attendees Organisers could lose track of student whereabouts, hindering fire safety procedures and endangering attendees which are unsupervised unbeknownst to the organisers	<ul style="list-style-type: none"> All attendees will be required to sign in and out of the building so that the organisers are kept aware of the number of attendees are in their care. All attendees will be required to install the SafeZone App. This will be situated at the south entrance to Engineering A, exit via other entrances will not be permitted except in emergencies. All access to the building by students will be through the use of student IDs to ensure no unauthorised personnel enter the building 	LOW	A
Preparation and consumption of food and drink	Burns from hot drinks, choking on food/drink, allergic reaction. illness	Staff and attendees Allergy/intoleranc e- sickness, allergic reactions, stomach upsets, alcohol abuse	<p>Note that due to budgetary constraints it is currently undetermined to what extent food and drink will be provided as part of the event or whether attendees will be expected to bring food and drink with them. In the event that food is provided, the following measures will be observed:</p> <ul style="list-style-type: none"> Hot drinks will be accessible by the Hot filtered water available at the Bring and Ping station on the ground floor situated at the food and drink area to allow attendees to prepare their own drinks. Disposable spoons and cups will be provided with lids to minimise the risk of spillages and burns. Disposable plates, bowls, cups, and cutlery are provided to help consumers cut and eat their food to minimise the chance of choking. No one under the age of 18 is attending the event. No consumption of alcohol will be permitted at all. Staff and attendees to inform organisers of any special dietary requirements (e.g. food allergies) Any refreshments will be provided by University approved caterers where possible and all food and drinks to be clearly labelled for visitors to determine their suitability. All participants are to inform organisers immediately if feeling unwell. Food and drink will only be permitted to be consumed on the ground floor whilst drinks will be permitted to be consumed on 	LOW	A

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			<p>the first and second floor. Under no circumstances will food or drink be permitted to enter the makerspace.</p> <ul style="list-style-type: none"> Food and drink to be supplied in an approved space, see approved floor plan, where no assembly work will be taking place. 		
Conduct of attendees	<p>Violence and aggression</p> <p>Theft</p> <p>Unauthorised persons</p>	<p>Staff and attendees</p> <p>All attendees due to inappropriate behaviour of self or others or interaction with uninvited members of the public</p>	<ul style="list-style-type: none"> All staff and attendees are expected to act in line with the Acceptable Behaviour as outlined in the Dignity at Work and Study Policy. All staff and attendees are responsible for ensuring that they behave in an acceptable manner, showing respect all others. They should consider their own behaviour and the impact it can have on others. Legitimate, reasonable, and constructive criticism of performance or behaviour, or reasonable instructions given to staff or attendees at the University, will not amount to unacceptable behaviour on their own. No alcohol to be consumed at the event or off site by staff, organisers or attendees during the event 	LOW	A
Preparing for event	Building defects (e.g. slippery floor, poor lighting) causing injuries	<p>Staff and attendees</p> <p>Physical injury</p>	<ul style="list-style-type: none"> Premises are maintained by Estates and any defects to be reported immediately on x52424 Areas used by the visitors to be checked by organisers prior to the event to make sure conditions are satisfactory Organisers to arrange clean up of spillages as soon as possible. Warning signs will be displayed if the floor becomes wet. 	LOW	A
Preparing for event	Electrical items	<p>Staff and attendees</p> <p>Fire, shocks, and burns</p>	<ul style="list-style-type: none"> Equipment visually inspected to ensure it is in good condition and free from defects. Any defects to equipment should be reported immediately and the item taken out of use. 	LOW	A
Movement of attendees in event spaces	Slips trips and falls.	<p>Staff and attendees</p> <p>Slipping, tripping or falling and sustaining injury due to obstacles in the way or spillages</p>	<ul style="list-style-type: none"> Any leaks, spillages or hazards during the event will be reported to House Services and cleared away promptly and attendees kept away until it is made safe. Organisers will take a slippery floor sign/spill mat. Lighting levels are suitable and sufficient. Do not block access and egress with equipment or apparatus. Keep all thoroughfares tidy at all times. Tidy any cables to prevent tripping hazards. 	LOW	A

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			<ul style="list-style-type: none"> • Use of the first- and second-floor meeting rooms by the attendees will be allowed. • Access to third floor and above of Engineering A and access to all of Engineering B will not be permitted for the duration of the event and will be cordoned off. • Makerspace access will be limited to that of the approved working hours, outside of which it will be barriered off to ensure no student can access or use the tools during these hours. • Any organiser or attendee seen in breach of these requirements will be asked to leave the event immediately and potentially face barring from future events hosted by the Robotics Society. • A committee member and on duty staff will periodically check and circulate to ensure no student has breached these measures. 		
Building security	Suspicious people in and around campus	Staff and attendees Difficulty in contacting help/assistance	<ul style="list-style-type: none"> • Ensure Swipe card is used to access building and must not allow anyone to tailgate. • All access will be through the swipe card access revolving door only. • A member of committee will be stationed at the door (Inventory area) to ensure only approved personnel are permitted to enter. • Access through the revolving door or automatic door will not be allowed except for accessibility reasons. • The only ingress point will be the south entrance to the building. • If you see any suspicious activities in and around the premises, get yourself to a safe place and call Campus Security immediately on 0161 3069966 • Must not enter into any area unauthorised for lone working or out-of-hours • When entering and exiting the building, keep to well-lit area and be extra vigilant of surroundings 	LOW	A
Soldering	Burns and inhalation of fumes	Attendees Attendees may be burned on soldering irons or inhale fumes from soldering	<ul style="list-style-type: none"> • Supervising committee members and staff will direct attendees in the proper use of soldering irons and extraction systems prior to their use. A checklist will be kept of attendees who have received this direction in order to monitor which attendees are allowed to use soldering facilities. • Committee members and staff to be trained and follow separate soldering risk assessment. • No soldering will be permitted to take place without adequate 	LOW	A

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			<p>extraction being used. Participants soldiering without proper fume extraction will be asked to leave.</p> <ul style="list-style-type: none"> No soldering will take place between 07:00 and 17:00 without the supervision of at least one member of staff. No soldering will take place between 17:00 and 22:00 without the supervision of at least one member of staff. No soldering will take place overnight between 22:00 and 07:00 under any circumstances. Circuits will be constructed on breadboards wherever possible to remove the need for soldering where it is possible. 		
Working with saws and other sharp hand tools	Sharp edges	Attendees Attendees may be injured on sharp edges	<ul style="list-style-type: none"> Solutions to the challenge will be possible that do not require sharp-edged tools (i.e. saws, knives, etc). In order to encourage creative problem solving, attendees will be permitted to use sharps if they wish to, providing they do so with appropriate staff supervision and within standard (09:00 to 17:00) hours. 	LOW	A
Working with power tools	Power tools and machines	Attendees Attendees may be injured by tools	<ul style="list-style-type: none"> Solutions to the challenge will be possible which do not require the use of power tools. As above, attendees wishing to explore solutions which require the use of power tools will be permitted to so only if under direct supervision of laboratory technicians within standard (09:00 to 17:00) hours. 	LOW	A
Working with materials for assembly of robots	Materials carry their own hazards such as dust inhalation and swarf	Attendees Attendees may be injured by dust or by swarf inhalation or other material related hazard	<ul style="list-style-type: none"> The event will be structured such that the only materials provided to attendees are cardboard, polymorph, Meccano or similar. Attendees wishing to use other materials (i.e. manufactured boards or plastics) may only do so with supervision by laboratory technicians within standard (09:00 to 17:00) hours. 	LOW	A
3D Printing	3D Printer beds can be hot, and they feature moving parts	Attendees Attendees could be burned by the print bed or injured by the moving parts of the printer	<ul style="list-style-type: none"> Printers used by the society will be overseen by a designated committee member who is trained in their use at all times. Designated committee member to follow training and separate risk assessment for use of 3D printer. Attendees will not be permitted to interact with printers directly, they must submit their files to the overseeing committee member who will then manage the printing process. Any printers brought onto the site for use by during the event will be inspected to ensure it is in serviceable condition and suitable to be used. 	LOW	A

Activity	Hazard	Who might be harmed and how	Existing measures to control risk	Risk rating	Result
Tired attendees operating tools	Attendees	Attendees Attendees may injure themselves or make mistakes due to tiredness	<ul style="list-style-type: none"> Supervising committee members and staff will monitor participants for tiredness and will not permit tired participants to take part in any potentially hazardous activity (i.e. soldering or use of tools). In extreme cases supervising committee or staff will send participants home to sleep. 	LOW	A
Operating within Engineering A, Designing of system - Workstations	Faulty equipment. Baggage. Mess	Attendees and organisers as the move around the building. Electrocution. Slips, trips, and falls.	<ul style="list-style-type: none"> Attendees are permitted to bring onto site laptops and other electrical equipment to use during the course of the event provided it does not pose any additional unaccounted for risk. All equipment must be check by the attendees before use to ensure that it is in serviceable order. Equipment found before or during the course of the event which is deemed to not be in serviceable condition will not be used within Engineering A. All baggage will be safely stowed under the worksurfaces away from any walkways and wires for equipment will be kept to the top of the workstations as to remove any potential trip hazards. All work areas will be kept relatively clear of all mess and rubbish will be disposed of in the appropriate manor. 	LOW	A
Construction of the robot.	Burns, Cuts, grazes, Puncture wounds.	Attendees working with equipment and robots. Organisers when handling of attendees systems.	<ul style="list-style-type: none"> Due to the nature of the event, attendees my choose unconventional means of construction materials and methods in order to reach the goal. Basic building materials will be provided by the society however any material or equipment brought externally will be assess by an organiser in order to deem it safe for use within the given solution otherwise it will be removed. Handling of the robots will be done with the utmost care to avoid injury, attendees will be persuaded to avoid construction systems with sharp edges or raw edges which might pose a risk of injury. All tools used to construct the solutions will be provided for to the attendees and limited to that which are freely accessible within the makerspace. All equipment and tools are covered by their own RA produced and available at the makerspace. No attendee will be using tools other then drivers and non-power tools outside of the makerspace. 	LOW	A

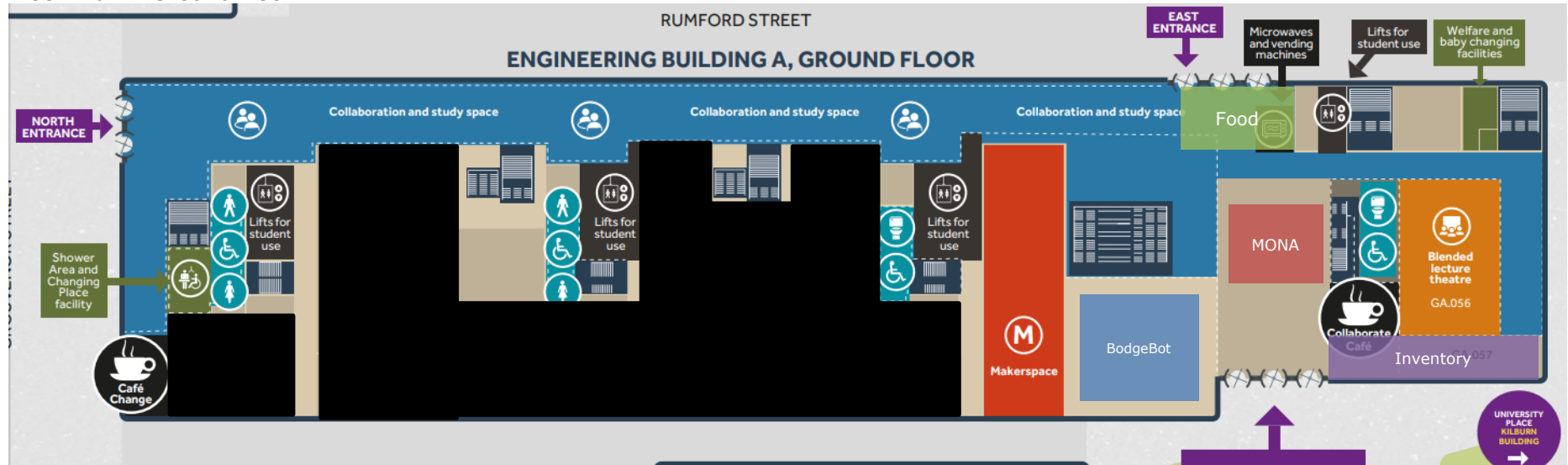
Activity	Hazard	Who might be harmed and how	Existing measures to control risk	Risk rating	Result
Operation of the robots - testing	Trips and falls. Damaged equipment. Blockage of emergency evacuation routes.	Everyone. Operation of robots outside the designated working parameters could result in trips and falls of others as well as the blocking of vital evacuation routes	<ul style="list-style-type: none"> All robots are to be tested in a designated test area. Those of the MONA and BodgeBot competitions have their own areas as detailed in RA_2023_Hackabot Mona Football and RA_2023_Hackabot BodgeBot. Dependant on the size of the robot system, attendees will be permitted to test any robots at their work stations. If any system requires more space such as operation on the floor, it will be performed in an open area away from other attendees and clear of any evacuation routes. All systems will be limited to a maximum speed of 0.2 m/s ground speed. Any equipment damaged in the testing of the systems will be removed and no longer used and replaced with a suitable alternative. 	LOW	A
DSE	Tiredness, aching, CTS	Attendees	<ul style="list-style-type: none"> Attendees are always recommended to find a suitable comfortable workstation which meets all their basic DSE requirements. Attendees are recommended to periodically take rests and breaks from prolonged stagnation and desk work. For every 1 hour of work, it is recommended that attendees take a 5 to 10 minute break (HSE). Attendees will have access in and out of engineering A and will be advised to regularly take breaks. 	LOW	A
Operating within Engineering A - medical	Medical incident	Everyone	<ul style="list-style-type: none"> There will be at least one qualified first aider on sites at all times to deal with any situation which may occur during the course of the event with their details provided in advance of the event. Security staff are first aid trained and contactable on x69966 and have been informed of the event - ACTION All to carry fully charged mobile phones and have the SafeZone App installed - ACTION. Defibrillator located on the ground floor by GA.048 and in the York Street building. Organisers to check with all their attendees whether they have any medical circumstances which might require specific support, or which could be exacerbated by lack of sleep (e.g. Epilepsy, Diabetes, Mobility). Any attendee that is identified as requiring additional assistance in the event of an evacuation will require a separate RA. & PEEP which will be produced in advance of the 	LOW	A

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			event with the assistance from TEAMS - ACTION		
Operating within Engineering A - Visitors	Visitors	Potential visitors on site who are unaware of evacuation procedures	<ul style="list-style-type: none"> Visitors will most likely be industrial sponsors who wish to visit the event for judging purposes and for promotional reasons. All visitors will need proof of ID before being allowed within the building. All visitors to the event will be agreed to ahead of the event and no unauthorised visitors will not be allowed to attend the event. -ACTION All visitors will be attended to by one of the organisers and it will be their responsibility to ensure the safety of said visitor in the event of an emergency. All visitors will be required to sign in and out of the building. All visitors will be brief upon arriving to the event actions to be taken in the event of an emergency. Visitors will be required to wear a badge stating that they are "Visitors" clearly identifying themselves from the rest of the attendees. 	LOW	A
Operating within Engineering A – Student occupation.	Occupation of Engineering A and B by unauthorised body.	<p>Risk to the safety of the attendees and staff</p> <p>Property and equipment</p> <p>Fire risk.</p>	<ul style="list-style-type: none"> The safety of all attendees, organisers and staff is paramount. The event will only go ahead if the safety of all those involved can be assured. All actions have been taken to minimise the spread of awareness of the event to those who may be involved. Advertisement to only known friendly societies and in FSE new letter. All Student IDs of attendees recorded prior to the event and only allowed access through the revolving swipe card doors. All relevant Student IDs will be provided to the Service Delivery Team no later than the 22nd of March to ensure that out of hours access can be arranged. Occupation of the building in the lead-up to the event will result in the event being postponed till a later date. In the event of an occupation during the course of the event, the event will cease immediately, committee will escort people to the exit, recording the name, Student ID and time the person left 	MEDIUM	A

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			<p>the building. Student access to the building will be revoked to stop re-entering the building, list of names of students and IDs who failed to exit or not accounted for will be supplied to the university for investigation.</p> <ul style="list-style-type: none"> On-duty staff will deal with the situation whilst the committee clear the areas of all hardware and students. Once all students have been safely evacuated. If safe to do so, all committee will leave the building and leave the on-duty staff and security to de-escalate the situation. Any involvement of the attendees or committee in the occupation will result in a permanent ban from all future events as well as immediate removal from the society. The society reserves the right for its members to peacefully protest but condones the illegal occupation of university property and will take all measures to ensure that this does not occur. 		

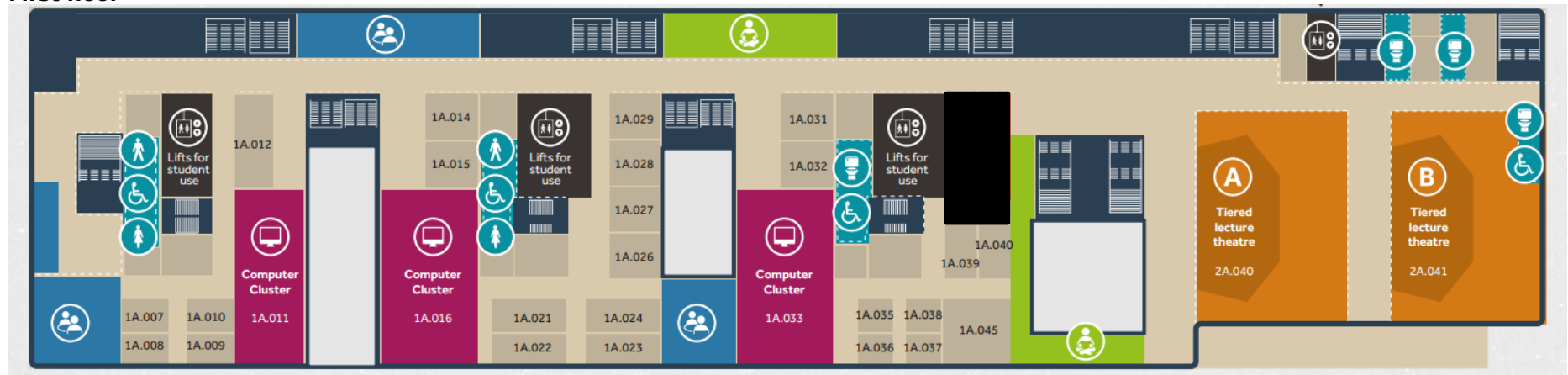
Action plan				
Ref No	Further action required	Action by whom	Action by when	Done
1.	Dynamic assessment of risk shall be conducted throughout the event. Upon any significant change organisers to assess if the event should be stopped or seek advice from approver	Organisers		
2.	Organisers to be given basic training as fire evacuation marshals in case there is an evacuation	Organisers		
3.	Security to be informed of the event, will check from time to time if requested and be on alert for any first aid events	Organisers		
4.	Persons from the University responsible for organising the event to have mobile telephones throughout the event to deal with any problems that may arise.	Organiser		
5.	Areas where events are to take place are to be inspected by staff before the event to check for any defects or conditions that might give rise to slips, trips, or falls. Any problems identified will need prompt action.	Organiser		
6.	Risk assessments for individual activities taking place must be carried out in advance of the visit by the University staff responsible and provided to school safety advisor. Control measures there in must be in place and fully operational and checked by staff before use.	University		
7.	Any equipment, including electrical equipment to be used by the staff, is subject to a current electrical safety test and a visual check before use.	Organiser		
8.	Access must be added to the cards of supervising committee members and staff to permit participants to enter and exit the building during the course of the whole event 9:00am Saturday – 15:00pm Sunday.	Organiser		
9.	Access must be added to the cards of the attendees for the hours of 11:30am Saturday – 12:30am Sunday to allow access to the building.	Organiser		
10.	Organisers to make a list of visitors who will be attending the event, expected arrival and departure times for both days and secure visitor badges to clearly delineate them from the other attendees	Organiser		

Floor Plan – Ground floor



Above are the approximate location 4 areas which will be set up for the 2 challenges as well as food and inventory location. The areas marked in Black will not be accessible to attendees during the course of the event.

First floor



Second Floor

