

Newcastle University - Risk Assessment

Project title	Use of the Mosquito, DragonFly ad Beckman Coulter dispensing Robot		
Description of work activity	The following risk assessment and guidance has been developed to assess the hazards, risks related to the use of the mosquito, the Dragonfly robot and the Beckman coulter robots. It identifies the appropriate prevention and control measures to reduce them.		
Unit name	Newcastle University – Biosciences Institute	Location	M3.032 Cookson Building
Assessor	Dr. Johan Panek	Approver (Manager / Responsible person)	Dr. Arnaud Basle
Date of assessment	05/03/2025	Review Date (2 years)	Click or tap to enter a date.

	Hazards	Risks (Who might be harmed & how?)	Controls
1.	Electrical shock hazard.	Users of the robot	<ul style="list-style-type: none"> - The robots are annually tested (PAT testing). - Any obvious danger, spark/damaged cables are reported immediately to technical staff and the equipment not used or switch off if in use.
2.	Risk of injuries by robot moving parts.	Users of the robot	<ul style="list-style-type: none"> - Robots operating area is clearly marked on the bench.
3.			

Additional Controls (is there anything you need to plan for?)	Who	Target Date	Completion Date
NA	[Insert Name]	Click or tap to enter a date.	Click or tap to enter a date.

Emergency procedures
Electrical Shock Response
Step 1: Ensure Personal Safety Do not touch the victim if they are still in contact with the electrical source.

Disconnect the power supply immediately, if safe to do so (use an emergency stop button, main switch, or circuit breaker).
If turning off power is not possible, use a non-conductive object (wooden stick, rubber gloves) to separate the victim from the source.

Step 2: Assess the Victim's Condition

If the victim is unconscious and not breathing, begin CPR immediately and call emergency services (999/112/911).
If the victim is conscious, check for burns, breathing difficulty, or irregular heartbeat and provide first aid.
Keep the victim warm and calm until medical help arrives.

Step 3: Call for Emergency Assistance

Call emergency services (999/112) and provide details of the incident, including location, victim's condition, and whether CPR is in progress.
Notify the site safety officer or supervisor.

Step 4: Prevent Further Incidents

Lockout/Tagout (LOTO) the faulty equipment.
Conduct an incident investigation before restarting the system.

Injury from Robot Moving Parts

Step 1: Stop the Robot Immediately

Press the Emergency Stop (E-Stop) button if it is safe to do so.
If the emergency stop is inaccessible, remove power to the system at the main control panel.

Step 2: Provide First Aid

If the injury involves severe bleeding, apply direct pressure using a clean cloth.
If the person is trapped, do not attempt to remove them unless there is immediate danger (e.g., fire, further injury).
If there is a fracture, immobilize the affected limb.

Step 3: Call for Emergency Assistance

Dial 999/112/911 and provide details on the injury and location.
Notify the responsible safety personnel.

Step 4: Secure the Area

Do not restart the robot until a full safety inspection is conducted.

Report the incident and document any contributing factors to prevent recurrence.

Signature of Responsible Person (Double click on the signature box below)

Johan Panek