Risk Assessment Summary Report/Print (landscape)

Reference	1990	**Description of Space or Activity/Task or Equipment**	Laboratory used for Optical and Electron Paramagnetic Spectroscopies. The space holds 14 Spectrometer and equipment used in sample preparation and mounting.
Assessment Date	15/08/2022	**Publish To Portal**	No
Assessor Name	Ben Breeze	**Risk Assessment Title**	Millburn House G78.
Assessment Team Members	Ben Green	**Review Date**	06/09/2025
Role / Space / Project Reference		**Current Risk Level (1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High)**	2
Department	Use the search function above or double click here for org chart -> Academic Faculties -> Faculty of Science, Engineering and Medicine -> Research Technology Platforms - RTPs -> Spectroscopy Research Technology Platform - RTP	**Final Risk Level (1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High)**	2
Location Details	Central Campus-Millburn House-Ground Floor-G78 - (01.005.000.051) Spectroscopy RTP Laboratory Millburn House G78.	**Risk Assessment Number**	0
Risk Assessment Category	Space	**Additional Information**	All Lab users must undertake an in person Induction to the lab with the facility manager or other authorised person. This includes Emergecny exit Lab rules, waste procedures, additional emergency procedures which need to be followed, All emergency porcedures are available in the Safety Folder in the lab. Over night and loan working is permitted in the Facility for Postgraduates and staff.
Date Record Created	15/08/2022		

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Hazard Type & Hazard Description	Who may be at Risk? & How May Person(s) Be Harmed	Existing Control Measures	L	S	R	Where current risk is M, H or VH, what additional Control Measures are required?	L	S	R
People & Wellbeing Use of PC work stations	Contractor Laboratory Worker Staff Student pain in necks, shoulders, backs, arms, wrists and hands as well as fatigue and eye strain	Admin - Information, instruction, supervision & training. Admin - University policy & procedure guidance followed. Eng/Admin - Reasonable adjustments made.	Minor	Unlikely	Very Low		Minor	Unlikely	Very Low
Work Environment Lone working.	Laboratory Worker Staff Student	Admin - Awareness training provided. Admin - Communication systems for lone working. Admin - Emergency response plan established and trained out. Admin - Lone worker alarms.	Serious	Unlikely	Low		Serious	Unlikely	Low
Work Environment Insufficient or poor lighting.	Contractor Laboratory Worker Staff Student eye strain,	Eng - Adequate lighting in place. Eng - Lighting level sufficient for work activity. Additional task lighting to be considered.	Minor	Unlikely	Very Low		Minor	Unlikely	Very Low
Manual Handling Pushing/pulling. Lifting/lowering/carrying objects or awkward loads.	laboratory Worker Staff Student Contractor Bruises Sprains Broken Bones.	Eliminate - Manual handling operations avoided. Substitute - Mechanical aids are used reducing the risk (hydraulic lifting table). Admin - Awareness and technique training provided. Admin - Operations fall within weight guidelines for men. Admin - Operations fall within weight guidelines for women. Admin - Specific risk assessment/survey completed. Admin - University policy & procedure guidance followed.	Serious	Unlikely	Low		Serious	Unlikely	Low

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Equipment/Plant Manual movement causing impact (hydrualic trolley).	Laboratory Worker Staff Student Contractor Bruises Sprains Broken Bones.	Admin - Awareness training provided. Admin - Good levels of housekeeping maintained with clean as you go policy in place. Admin - Inspections conducted in accordance with site scheme. Admin - Maintenance operations are conducted by competent persons and covered by dynamic assessments. Admin - Signage used to raise awareness. Admin - Safe working load known and adhered to. Admin - Specific risk assessment/survey completed.	Serious	Unlikely	Low		Serious	Unlikely	Low
NIR Electromagnetic Fields (EMF) Exposure to electromagnetic fields (sensory/thermal effects) near to action levels (ALs) or exposure limit values (ELVs) Fileds upto 21 Tesla are present in the adjecent space	Laboratory Worker Staff Student Contractor Especially people with electronic medical devices ill-health (fainting) failure of electronic health devices leading to discomfort or rare cases death bruises from items caught in field	Eng/Admin - Access is restricted to authorised personnel. Admin - Safe System of Work (SSoW) established and trained out. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness. Admin - Specific risk assessment/survey completed. All visitors and new starters are informed of the dangers to medical devices and are asked to confirm they do not have such devices before entering the space. People are not permitted in the space with Pace makers. Other medical devices most have an individual risk assessment conducted.	Major	Unlikely	Low		Major	Unlikely	Low

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Working at Height Falls from height. Objects falling from height.	Laboratory Worker Staff Student Contractor Bruises, Sprains, Broken Bones	Admin - Access equipment used in accordance with relevant guidance. Admin - Awareness training provided. Admin - Inspection schedule in place. Admin - University policy & procedure guidance followed. Admin - Type of access equipment assessed for suitability before selection.	Minor	Unlikely	Very Low		Minor	Unlikely	Very Low
Hand Tools / Powered tools Heat gun, hot plates, ovens	Laboratory Worker Staff Student Contractor Burns	Trained users only, items to be switched off when not in use, signage used to indicate hot surfaces	Serious	Unlikely	Low		Serious	Unlikely	Low
NIR Class 1, Class 2 or Class 3R laser Laser distraction, glare or flashblindness hazard, eye injury	Laboratory Worker Staff Student Contractor Laser strike to eyes or Skin	Systems are all class 1 under normal operation. when the sytems are running as not class one they must be enclosed and clear signage in place to warn all lab users. PPE - Personal Protective Equipment (PPE) is issued and worn Protective Glasses (see local RA for detail) Eng/Admin - Access is restricted to authorised personnel. Eng - Specific guarding in place to reduce exposure during alignment even if at low power.	Major	Unlikely	Low		Major	Unlikely	Low
Equipment/Plant chilled water system, flooding of laboratories	Laboratory Worker Staff Student Contractor Flooding may damage equipment Flooding may create a slip hazard	Admin - Inspections conducted in accordance with site scheme. Admin - Statutory inspections are conducted as required and in accordance with site scheme. Local flood detection system in place with auto shut off.	Minor	Possible	Low		Minor	Possible	Low

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Equipment/Plant Use of scalpels and needles, Glassware	Laboratory Worker Staff Student Contractor Cuts and punture wounds	Take care, dispose of sharps and broken glass in the approved receptacles provided.	Serious	Unlikely	Low		Serious	Unlikely	Low
Equipment/Plant Explosion/implosion of cryostat/vacuum system Cuts from Shards of Glass Metal possibly to eyes	Laboratory Worker Staff Student Contractor Explosion/implosion of cryostat/vacuum system Cuts from Shards of Glass Metal possibly to eyes	Use of vacuum systems prohibited unless user is trained in the safe operation of the vacuum pumps. Visual inspection of equipment before operation Safety valves are to be used and checked regularly. Admin - Safe System of Work (SSoW) established and trained out. Admin - Only trained, competent operators permitted to use the equipment.	Serious	Unlikely	Low		Serious	Unlikely	Low
Equipment/Plant Inert Gas used to create Elevated Temperatures.	Laboratory Worker Staff Student Contractor Elevated Temperature causing Burns	Admin - Signage used to raise awareness. Eng - Fixed guarding is in place preventing access. Eng - Equipment fixed securely to the floor. Admin - Safe System of Work (SSoW) established and trained out.	Minor	Likely	Low		Minor	Likely	Low

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Substances Hazadous Chemicals	Laboratory Worker Staff Student Contractor Chemicals, skin contact Chemicals, inhalation Chemicals, eye hazards Chemicals, other hazards, failure to label samples	Handle all samples wearing disposable protective gloves. Wear appropriate PPE handling chemicals. Clear up all spillages and dispose of waste. Wash hands before leaving the laboratory. Handle all volatile and powdery samples in effective extraction system or in sealed containers. Train users in use of LEV systems. Routine inspection and maintenance of extraction system to meet statutory requirements. Eye protection must be worn when handling chemicals. All users of the preparation lab must wear PPE (e.g eye protectio or lab coat. Obtain as much information as possible about sample hazards from customers. Change submission form to accommodate safety information. Staff training to label clearl	Major	Unlikely	Low		Major	Unlikely	Low

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Substances Compressed gases, various hazards	Laboratory Worker Staff Student Contractor Risk of asphyxiation, risk of cylinder explosion during fire	All staff who handle compressed gases to be trained. Cylinders to be returned to outside building store when practical to do so. Cylinders inside building must be secured to immovable object. Storing on cylinder trolley is NOT acceptable. Regulators changed on 5-year cycle. Safety devices to be checked as required by written scheme. Safety devices vent outside in event of failure. Cylinder sizes minimised based upon usage. Oxygen sensors in rooms to avoid asphyxiation	Major	Unlikely	Low		Major	Unlikely	Low
Substances Cryogenics Inhalation or ingestion causing loss of consciousness, or asphyxiation	Laboratory Worker Staff Student Contractor Cryogenics Inhalation or ingestion causing asphyxiation	Admin - Safe System of Work (SSoW) established and trained out. Admin - General ventilation used. Room is fitted with Oxygen depletion warning sensors.	Major	Unlikely	Low		Major	Unlikely	Low
Substances Cryogenic liquids, burns, asphyxiation.	Laboratory Worker Staff Student Contractor Contact resulting in cryogenic Burns	PPE - Personal Protective Equipment (PPE) is issued and worn (specify). Gloves and Safety Specticles. Admin - Information, instruction, supervision & training. Admin - General ventilation used. Admin - University policy & procedure guidance followed. Admin - Safe System of Work (SSoW) established and trained out. PPE - Personal Protective Equipment (PPE) is issued and worn (specify).	Serious	Unlikely	Low		Serious	Unlikely	Low

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NIR Electromagnetic Fields (EMF) Potential exposure to radiation (acute/chronic health effects) Continuous wave Microwave source X-Band (200 mW maximum at 9.8 Ghz & Q Band 150 mW at 34GHz	Laboratory Worker Staff Student Contractor Burns to Skin and/or eyes	Microwaves are contained with the system under normal operation. Wave guides not to be tampered with. All alterations to wave guide to be conducted by trained staff/operators. Microwave power should not be on if waveguide is open. Visual inspection of Waveguides prior to operation	Serious	Unlikely	Low		Serious	Unlikely	Low
NIR Electromagnetic Fields (EMF) Exposure to electromagnetic fields (sensory/thermal effects) near to action levels (ALs) or exposure limit values (ELVs)	Laboratory Worker Staff Student Contractor Bruising, from objects caught in field ill-health (fainting) failure of electronic health devices	Eng/Admin - Access is restricted to authorised personnel. Admin - Safe System of Work (SSoW) established and trained out. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness. Admin - Specific risk assessment/survey completed.	Major	Unlikely	Low		Major	Unlikely	Low
Electricity Contact with live electrics.	Laboratory Worker Staff Student Contractor Electric Shock and/or burns	Admin - Portable Appliance Testing (PAT) conducted as per regime. Admin - Safe System of Work (SSoW) established and trained out.	Major	Unlikely	Low		Major	Unlikely	Low
Assessment Conclusion	Well established procedures have been in place for years, so the risk is low.								