Risk Assessment Summary Report/Print (landscape)

Reference	1914	**Description of Space or Activity/Task or Equipment**	Superconductivity and Magnetism Group - Characterisation Laboratory. Measurements of magnetic properties of materials between 1.7 and 300 K at magnetic fields of up to 12 T. Preparation of sample for measurements. Transfer of cryogens including liquid helium and liquid nitrogen for experiments.
Assessment Date	01/07/2022	**Publish To Portal**	No
Assessor Name	Martin Lees	**Risk Assessment Title**	P126 Physical Characterisation and Crystal Growth Laboratory on Level 1.
Assessment Team Members		**Review Date**	01/06/2025
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 -> Physics	**Final Risk Level (1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High)**	2
Location Details	01-042-000-014	**Not in use**	0
Risk Assessment Category	Space	**Additional Information**	Follow Room P126 Laboratory Rules (attached).
Date Record Created	01/07/2022		

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
Work Environment Optical Furnaces	Staff. Students Burns, Eye irritation from IR light	Do not look directly into the light in the furnace, always observe image on the TV/monitor screen. Do not open the furnace doors when in use and wait until the furnace is cooled down before removing sample.	Minor	Possible	Low		Minor	Possible	Low

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Work Environment Magnetic fields	Staff. Students Cleaners Damage to pacemaker. Hit by magnetisable object.	No entry to the laboratory with pacemaker. Signage is displayed. Individuals with metallic implants are warned of the magnetic fields before entering, and must stay in the exclusion zones. Do not use magnetisable items near cryomagnets, de-energize cryomagnet. Eng/Admin - Exclusion zone implemented. Admin - Information, instruction, supervision & training.	Minor	Unlikely	Very Low		Minor	Unlikely	Very Low
Working at Height Fall	Staff. Students Falls.	When using plastic steps students and staff are not to overreach and are to keep two feet on the steps at all times. Steps are visually inspected before each use. Admin - students and staff are provided with information, instruction and training through lab inductions.	Serious	Unlikely	Low		Serious	Unlikely	Low

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Work Environment Wet floors. Obstructed walkways. Stairway.	Staff. Students Cleaners Slip and trips Hit by falling objects.	Dry floors if wet, be aware of potential hazard. Caution wet floor signage is used if floors are wet to warn those using the area of the potential hazard. Do not block walkways with equipment or personal belongings. Be aware. Walkways are not obstructed by trailing cables. Cable floor covers are to used where necessary. Take care when using stairs, and use the provided handrail. Do not place any items on mezzanine guard rail. Eng - Adequate lighting in place. Eng - Adequate ventilation in place. Eng - Cooling/heating equipment used. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness. Admin - University policy & procedure guidance followed.	Minor	Unlikely	Very Low		Minor	Unlikely	Very Low

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Electricity Electrocution, burns.Contact with live electrics. Electrical overload. Incorrect isolation. Unauthorised access to electrical systems / infrastructure	Staff. Students. Electrocution, burns.	Do not tamper with or attempt to modify apparatus. Do not use untested apparatus. Eliminate - No live working permitted. Eng - Cables and leads are appropriately insulated. Eng - Electrical cabinets are secured. Eng - Electrical equipment is suitably fused and earthed. Admin - All fixed wire electrical installations are tested as per regime. All portable electrical equipment are PAT tested. Admin - Extension reels fully unwound before use. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness. Admin - University policy & procedure guidance followed.	Serious	Unlikely	Low		Serious	Unlikely	Low
Substances Cryogenic liquids (helium)	Staff. Students. Dewar over pressured or blocked with ice/solid air Dewar venting.	Ensure all safety valves are operating correctly. Do not leave dewars or cryostats open to atmosphere. Check dewar test is in date Evacuate room if oxygen meter alarm sounds Admin - General ventilation used. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness. PPE - Personal Protective Equipment (PPE) is issued and worn (specify).	Serious	Unlikely	Low		Serious	Unlikely	Low

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Substances Cryogenic liquids (nitrogen) Contact with substances stored under pressure.	Staff Students Shortness of breath, loss of consciousness, asphyxiation.	Ensure good ventilation. Ensure liquids do not overflow. Do not vent gases in a confined space. Evacuate room if oxygen meter alarm sounds. Admin - Awareness training provided. Admin - General ventilation used. Admin - Information, instruction, supervision & training. Admin - Signage used to raise awareness.	Serious	Possible	Low		Serious	Possible	Low
Substances Cryogenic liquids- direct contact with substances stored under pressure and cold surfaces..	Staff Students Cold burns, frostbite.	Use appropriate PPE (e.g. gloves, glasses, suitable enclosed footwear) Gloves must meet or exceed EN511 category 2 . Avoid contact with cold gas, liquid or cooled surfaces. Ensure hands are clean and dry.	Serious	Unlikely	Low		Serious	Unlikely	Low

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Substances Solvents (ethanol, acetone, propanol) Samples. Pump oil, vaccum greases. Contact or interaction with dangerous substances. Inhalation exposure to hazardous substance. Skin exposure to hazardous substance. Eye exposure to hazardous substance.	Staff Students Skin or eye irritation Chemical burns. Poisoning.	Admin - Awareness training provided. Admin - General ventilation used. Admin - Information, instruction, supervision & training. Admin - Refer to relevant COSHH Assessment (state). Admin - Signage used to raise awareness. Admin - Spill response/containment equipment in place. Admin - Storage in accordance with substance requirement. Admin - Substance awareness sheet available at point of use. Admin - University policy & procedure guidance followed. Admin - Wash facilities close by. PPE - Personal Protective Equipment (PPE) is issued and worn (gloves, goggles, masks, lab coats).	Serious	Unlikely	Low		Serious	Unlikely	Low
Assessment Conclusion	All risks minimized.								