Risk Assessment Form

(This is an active document and must be maintained)

UNIVERSITY OF CAMBRIDGE

Materials Science and Metallurgy

Date: Sept 2018

Building: DMSM

Supervisor of Room/Area:

Room or area:- Measurement Lab
(Describe location)

Name of Assessor(s): **Juliet Thompson**

Title of Activity / Experiment / Work Area:

Low Temperature Electrical and Magnetic Characterisation

Description of Activity / Experiment / Work Area:

Measurements of electrical and magnetic properties of thin film structures over temperature range 4.2 K to 300 K using liquid 38 L He Dewar

SECTION 1: Identify all significant hazards, who or what may be affected by each individual hazard and controls in place to reduce risk to a minimum.

Hazard Description	Hazard to whom or what	Controls in place to reduce risk to a minimum
Cold burns form liquid cryogens	User	Suitable PPE (gloves, coat) must be worn, samples not removed until T > 275 K.
Electrical hazards form measurement rigs (minor burns/shocks)	User	Leads appropriately isolated and away from operator access. Ops minimize interference with connections.
Explosion of blocked He Dewar/large uncontrolled release of cold gas	All those in vicinity	Established protocols and proper user training. Dewar equipped with blowout discs and emergency pressure relief valves.
Asphyxiation	All those in vicinity	Oxygen monitors installed, very large room – dangerous overall reduction in oxygen not possible.

Continued overleaf…..

Hazard Description	Hazard to whom or what	Controls to reduce risk to a minimum

SECTION 2: Emergency Procedures

Minor cold or electrical burns can be treated by first aiders. More serious burns will require hospital treatment. Separate notices provide contact numbers of experienced users to consult in event of possible Dewar blockage or cryogen release. In extreme case, physical isolation of Dewar and evacuation of area may be necessary.

Signature of Assessor(s)	**Juliet Thompson**	**Date: 04/09/18**
Signature of Supervisor		**Date:**

SECTION 3: Review - This assessment must be reviewed every 12 months or earlier if the basis of the original assessment is altered.

Review Date	Reviewed by (Signature)

Review Date	Reviewed by (Signature)