Risk Assessment Form

(This is an active document and must be maintained)

UNIVERSITY OF CAMBRIDGE

Materials Science and Metallurgy

Date: 14 Sep 2018

Building: 27 Charles Babbage Road

Supervisor of Room/Area: S. Komori/J. Thompson

Room or area: Basement, Measurement lab DMG -1_015

Name of Assessor(s): J.M. Devine-Stoneman

Title of Activity / Experiment / Work Area:

Use of 0.5 T probe for Josephson measurements (New probe)

Description of Activity / Experiment / Work Area:

Use of measurement probe for Josephson junction measurements, with applied magnetic field (up to 0.5 T) and microwaves, and associated electronics rack with current/voltage supply (current up to 10 mA, voltage typically of the order of a few V after gain) microwave frequency generator and lock-in amplifier. Used in conjunction with He dewar (see separate risk assessment).

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 from probe rod	The user	Maintain a gentle cooling rate of <0.3 K/s when inserting into the dewar to avoid icing up. Use a glove when raising the probe.
Electric shock from current/voltage supply/magnet power supply	The user	Check that wiring and plugs are in good condition and meet safety standards and that correct fuses are used. The location of mains switches should be known by the user.
Trip hazard from cables	All users of the room	Keep cables organised on the rack

Magnetic field in excess of 5 Gauss	Those with pacemakers in the vicinity	Pacemaker users should not approach the magnet. The entrance is marked with a warning sign.
Electric shock from energized high inductance magnet	User, only when servicing magnet or power supply	Magnet must be de-energized before disconnecting from power supply. Ensure that the power supply reads zero, then switch off the supply.

Continued overleaf…..

SECTION 2: Emergency Procedures

Switch off power at the mains

Signature of Assessor(s)		**Date: 14/09/18**
Signature of Supervisor		**Date: 14/09/18**

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)

