Department of Engineering Science

Risk Assessment

UNIVERSITY OF OXFORD

Risk Assessment Subject: **Fluids & Turbomachinery CAD CWM's (Pelton Wheel & Francis Turbine)**		
Site, Building & Location: Fluids Lab – Thom 3rd floor		Review Date : 28 April 2025
Assessment undertaken by: Bob Scott	Signed:	Date : 28 April 2023
Assessment Supervisor:	Signed:	Date: 28 April 2023

Assessing the Risk*

You can to this for each hazard as follows:

- Consequences: Decide how severe the outcome for each hazard would be if something went wrong (i.e. what are the Consequences?) Death would be "Severe", a minor cut to a finger could be regarded as "Insignificant".
- Likelihood: How likely are these Consequences to actually happen? Highly likely? Remotely likely, or somewhere in between?
- Risk Rating: Start at the left of the coloured Matrix. On your chosen Consequences row, read across until you are in the correct Likelihood column for the hazard in question. For example, an outcome with Severe consequences but with a Low probability of actually happening equates to a Medium risk overall. In this case "Medium" is what should be written in the Risk.

RISK MATRIX

CONSEQUENCES	LIKELIHOOD (or probability)			
	High	**Medium**	**Low**	**Remote**
Severe	**High**	**High**	**Medium**	**Low**
Moderate	**High**	**Medium**	**Medium/Low**	**Effectively Zero**
Insignificant	**Medium/Low**	**Low**	**Low**	**Effectively Zero**
Negligible	**Effectively Zero**	**Effectively Zero**	**Effectively Zero**	**Effectively Zero**

Hazard *(potential for harm)*	**Persons at Risk**	**Risk Controls In Place** *(existing safety precautions)*	**Risk**	**Further Actions Needed to Reduce Risk**
240 Vac electric shock	User	Portable equipment subject to regular test and inspection. RCD circuit breakers fitted to all circuits. Electrical repairs and alterations undertaken only by departmental electrician or competent contractor. Demonstrators to check validity of PAT test label. Contact Electronics if past 'best by' date.	Medium	**Do not operate electrical supply or controls with wet hands.**
Entanglement/entrapment in rotating machinery	User	Fixed guards in place - to be removed by Supervisor only (e.g. for runner/turbine change). Shut off power supply before removing turbine or guard.	Medium	None
Slip on wet floor.	User	Floor covering is slip resistant. Ensure any spills are wiped up – wet/dry vacuum cleaner available if required. Ensure that water fully drained before changing runner.	Low	None

Hazard *(potential for harm)*	**Persons at Risk**	**Risk Controls In Place** *(existing safety precautions)*	**Risk**	**Further Actions Needed to Reduce Risk**
Hearing affected by noise	User	Noise levels typically below 85 db(A) for noise duration of less than 40 minutes (Francis turbine & Pelton wheel). Disposable foam ear plugs supplied.	Low	Noise level measured at 74.8 dB(A) with pump set at 2906 rpm & 657W running Pelton wheel at 1860rpm & 24W. May 2023.
Legionella	All in lab	Chlorine dosing. Room temperature water. Tank drained when out of use from July to April.	Low	None