Derek Reed

Departmental Safety Officer

✉ Thom Building – Office 20:20
(First Floor behind Reception/LR3)

☎ Extn: 73180

☎ Mobile: 07931 855563

💻 e-mail: derek.reed@eng.ox.ac.uk

Risk Assessments

Website

eng.ox.ac.uk

- Intranet
- Departmental Services
- Health & Safety

Your Journey

- How ?
- Any problems ?
- Safe arrival ?
- WHY ?

Barton
Oxford, Headington
2
Oxford

Risk Assessment

- Requirement to eliminate hazards at earliest possible stage
  - Process Design
  - Pilot Production
  - Production
  - Logistics

Risk Assessment

- identify process specific hazards

  yourself, others & property

- evaluate hazard

- record significant results

- review existing / establish new

  control measures

- consult Supervisor

- later review if necessary acceptable

Risk Assessment

- integral part of project
- approved by DSO by 4pm.
  Monday 5th November (this year)
- check 4 yr. Noticeboard (name & shame)
- marked with project

Hazard

- any event that can cause harm to person, property or environment

Hazards

- rotation
- pinching / entanglement
- electrical
- impact
- muscular skeletal
- noise
- emissions, light, laser, X-ray
- flooring
- height
- illumination
- temperature
- chemicals (COSHH)
- biological
- waste disposal
- etc

Assessment

- assess hazards on location
- look at existing control measures
- are they adequate
- can the risk be reduced or eliminated
- additional engineering control measures
- Personal Protective Equipment is a last resort

Department of Eng Science

4th Year Project Risk Assessment

Form RA01 13/10/06

Risk Assessment of			Page 1 of
In Building			
Assessment undertaken	Signed	Date :	
Assessment supervisor	Signed	Date :	

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Control Risk

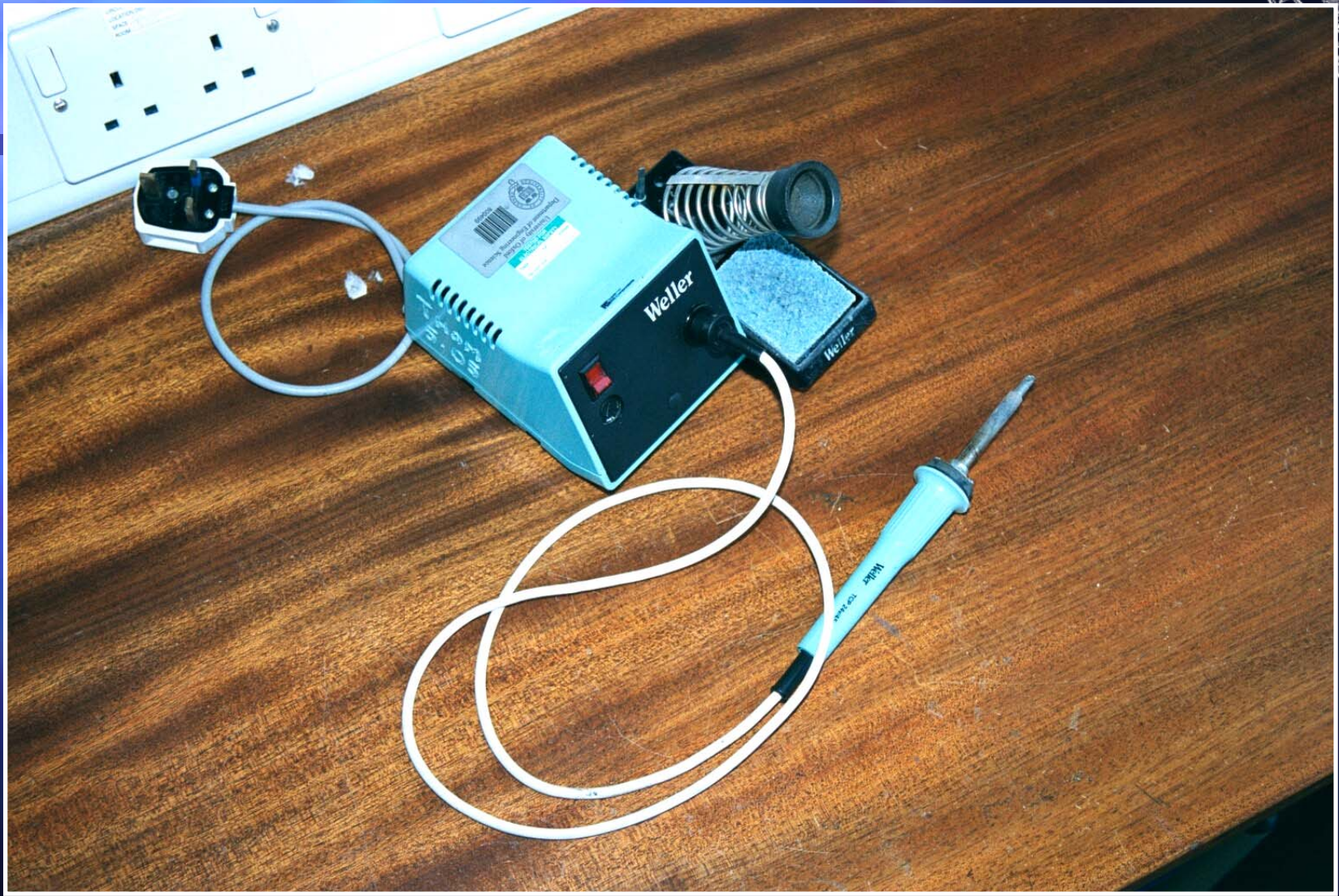
Your E-mail Address .....Checked by ..... date .....
(D J Reed)

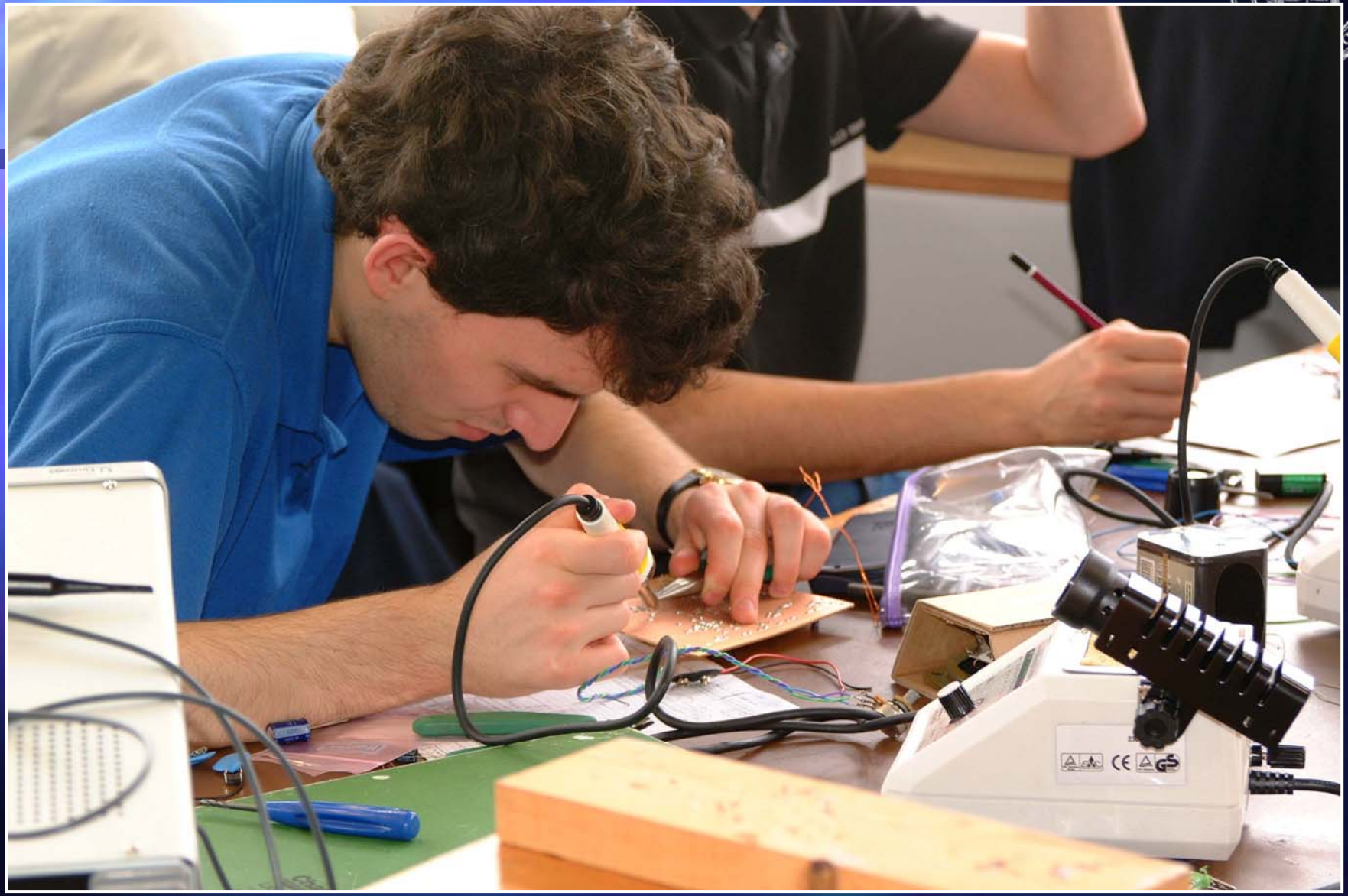
UPS S2/97

SICK
ATRV-JR
iRobot

EWERT PLACE
CHALFORD BLINDS

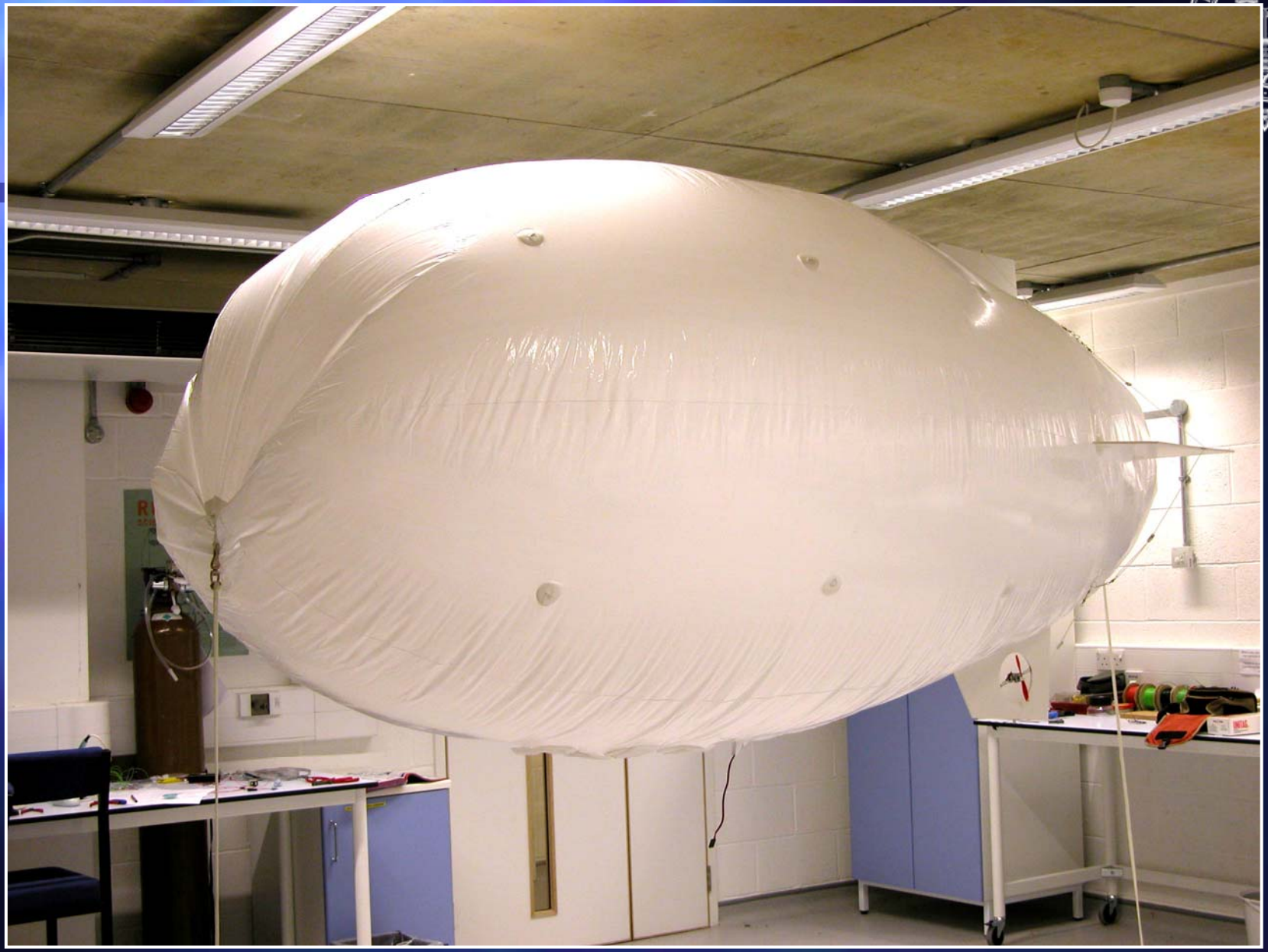
SICK
iRobot
ATRV-JR
Briggs & Stratton
PROPLUS 3500


Weller
Weller



Risk Assessment	**P5 Measurement Lab -Electrical**			Page 1 of **1**
In Building	**Thom – 5th Floor – Electrical Laboratory**		Review Date :	**6/5/07**
Assessment undertaken by	**D J Reed**	Signed	Date :	**6/5/05**
Assessment supervisor	**W R Moore**	Signed	Date :	**6/5/05**

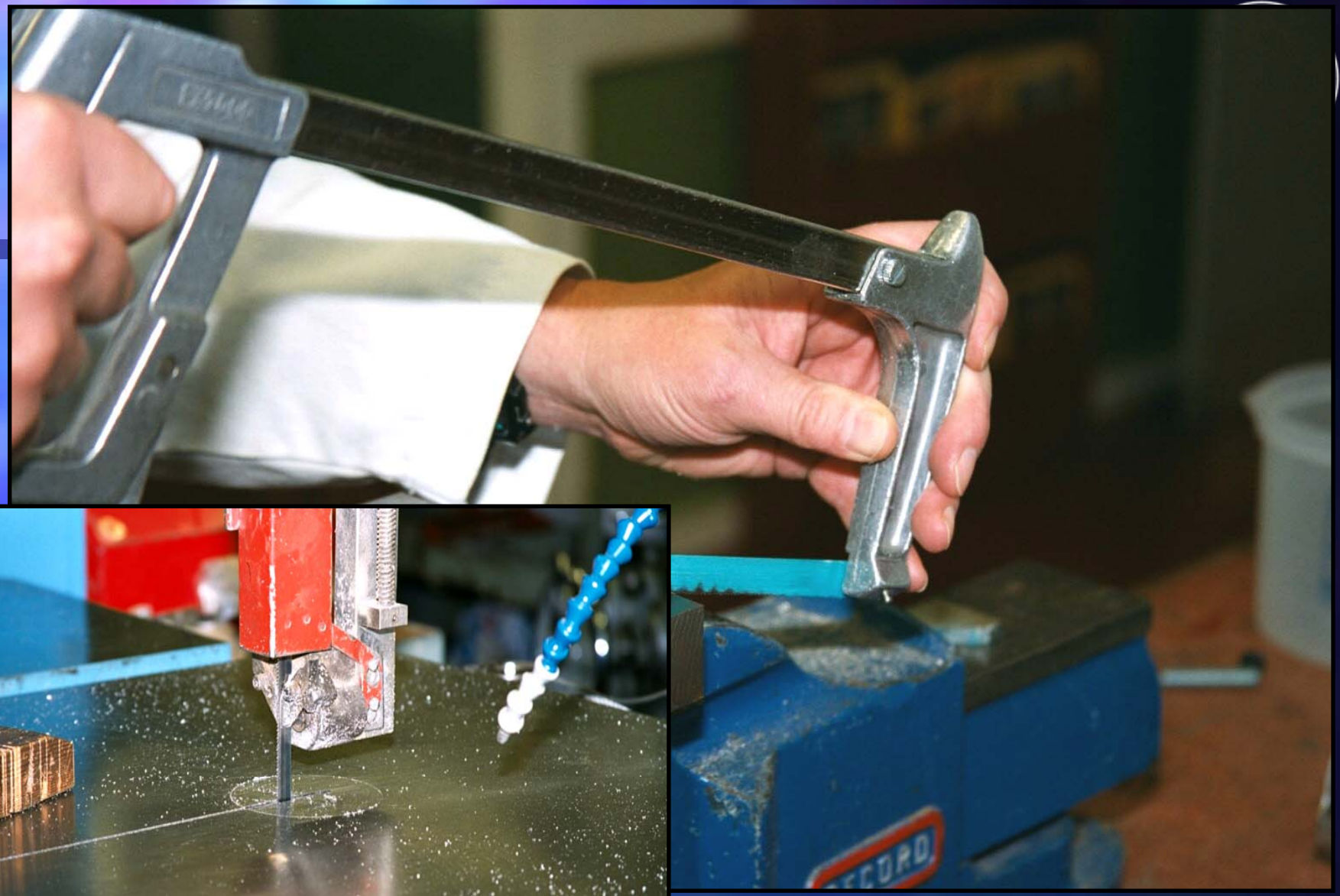
Hazard	Persons at risk		Risk Controls In Place	Further Action Necessary To Control Risk
240 Vac Electric shock	**Students/staff**		**Equipment PAT tested by Electronics**	**Supervisor to check validity of PAT test label**
Soldering irons - burns, melting cables/fire.	**Students/staff**		**Personnel advised on tidiness of working area, to ensure that all wires, cables and all other combustible materials are out of the way, to turn on soldering irons only when needed, keep iron in holder when not in use, not to touch bit or flick iron, to keep fingers at least 3 cm. away from the bit using pliers if required to work closer.**	**Demonstrators to point out locations of first aid stations, names of first aiders, emergency electricity stops, fire procedure and to check students are using good practice**
-fume inhalation	**Students/staff**		**Given duration of exposure, forced extraction unnecessary. Natural ventilation adequate to dissipate fumes. Windows can be opened as required.**	**Supervisor to monitor**
Lead content – solder	**Students – negligible risk of lead poisoning through skin contact and/or ingestion**		**Personnel to be advised to wash hands after practical finished. Signs posted.**	**None**
Cuts to hands, injury to eyes from use of workshop tools and electrical components	**Students**		**Students would be expected to apply good workshop and laboratory practice learnt from previous practical activities.**	**Supervisor to monitor**



HELIUM
BOC
4 bar

Risk Assessment of	3.5 m^3 Flume			Page 1 of 1
In Building	Jenkin Soils Lab		Review Date	
Assessment	Jens Schupp	Signed	Date :	
Assessment	D J Reed (DSO)	Signed	Date :	

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Contro Risk
Proliferation of water borne organisms	Researcher, others in vicinity	System treated with algaecide/biocide and chlorination level monitored as per supplier's recommendations. System configuration and operational parameters considered not conducive to legionellas organisms.	Refer to Fi-Clor COSHH assessment
Electric shock 240V, 3ph 415V	Researcher, others in vicinity	415V equipment installed by competent electrician Electrical repairs/alterations undertaken by departmental electrician only. 240V Equipment PAT tested by Electronics. RCD circuit breakers fitted.	Supervisor to check validity of PAT test label. Contract Electronics for retest if required. Researcher to monitor
Slips, trips and falls on water-contaminated floor	Researcher, others in vicinity	Personnel to be warned of dangers. Equipment available to remove spill/splash from floor at time of occurrence.	
Rupture of flume, header tank and water feed lines	Researcher, others in vicinity.	**Design pressure, operating pressure?** Header tank fitted with height/level sensor Drains in floor	
Back injury transferring 120 x 25 kg. bags of sand from Stores to Jenkin, then lifting and emptying bags into flume	Researchers, Technician	**None** **INCOMPLETE**	**Use Nuc. Phys. FLT to transfer from Stores to Jenkin.** **Construct platform to raise bags to height of flume using existing overhead crane**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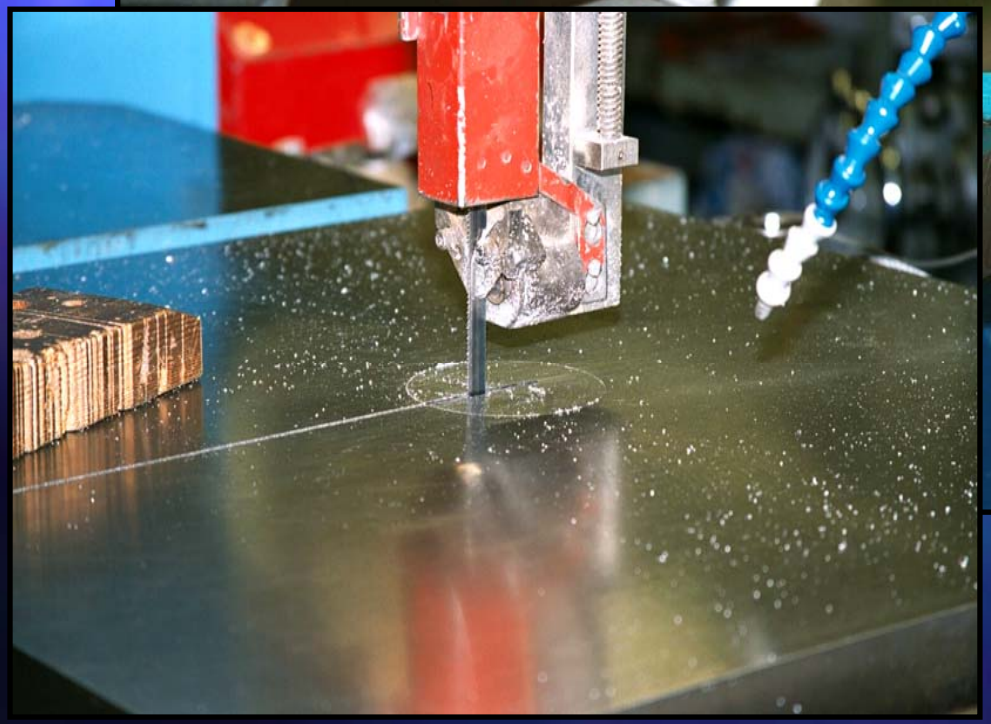


Department of Eng Science

DRAFT Risk Assessment

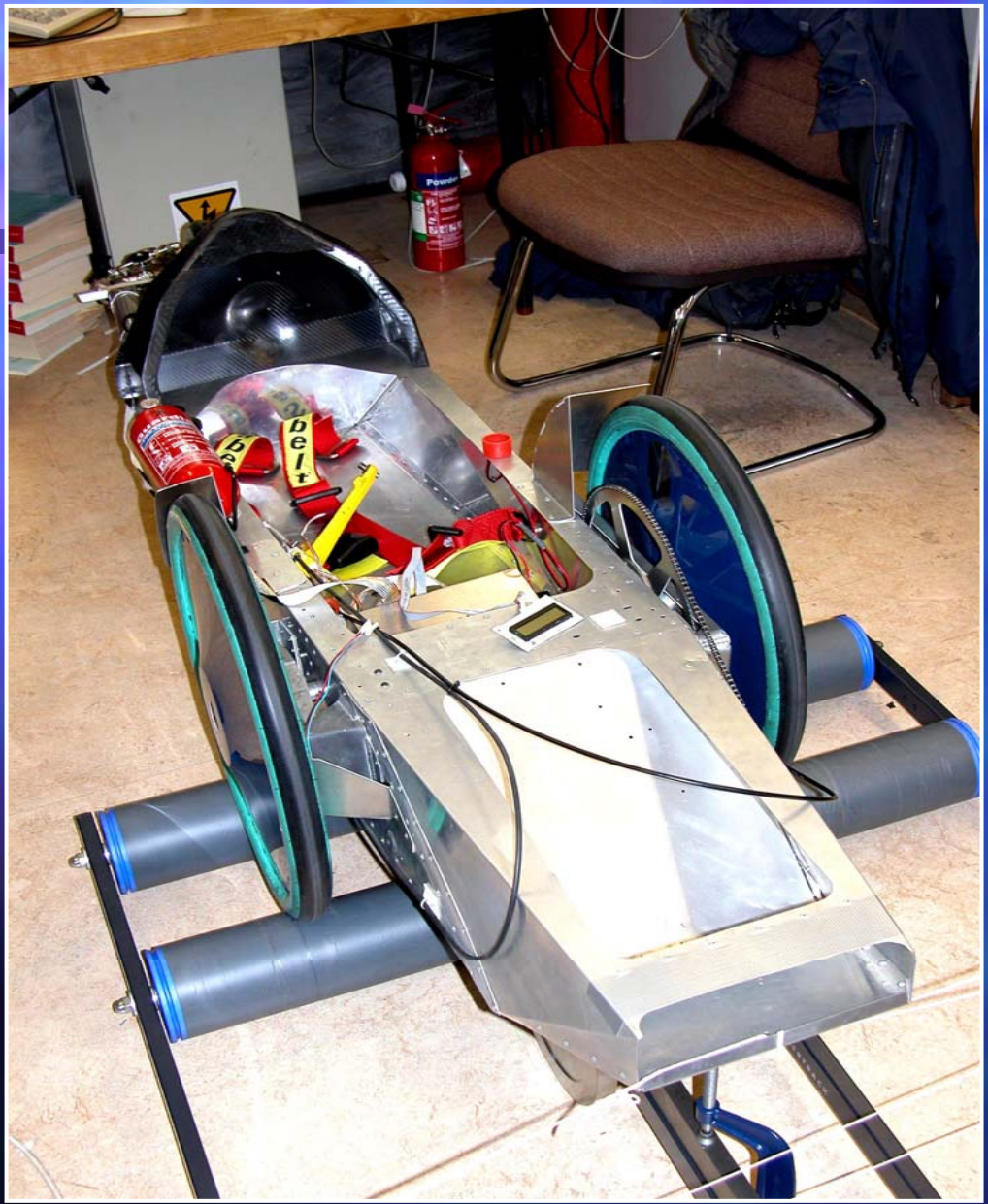
Form RA01 05/01

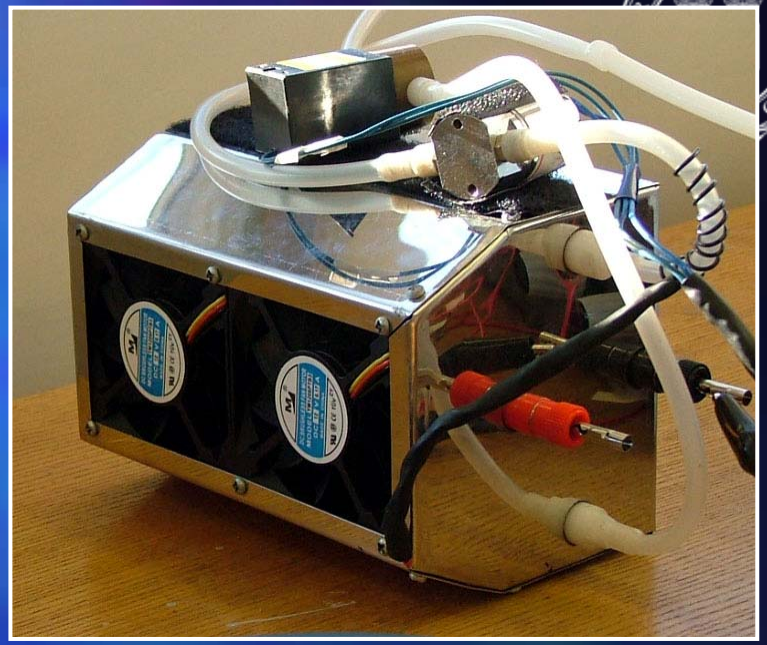
Serial No:		Risk Assessment of	A6 Structures – DBT Bridge Build (Build Phase) Page 1 of 1
In Building	Thom - 4th Floor - DBT Laboratory		Review Date :
Assessment undertaken by	H Burd	Signed	Date :
Assessment supervisor	D J Reed	Signed	Date :

Hazard	Persons Who Might be Harmed	Risk Controls In Place	Further Action Necessary To Control Risk
Injuries to face, head while carrying long lengths aluminium	Self, others	Advised to carry material vertically	Demonstrator to check
Loss of fingers while using cropping machines and guillotines	Self	Machines hand operated, advised to keep fingers away from cutting head Guillotine guarded to prevent hand access to cutting head	Demonstrator to check
Metal fragments in eyes while using pillar drills	Self	Eye protection to be worn – available and signs displayed	Demonstrator to check
Entanglement long hair, clothing etc in pillar drill rotating shafts	Self	Users to wear overalls, long hair to be tied back. Shaft guards and foot operated emergency stops fitted to 2 off Meddings pillar drills	Demonstrator to check
Dust in eyes while using compressed air powered riveting tools	Self	Wear eye protection signs posted	Demonstrator to check
General – cut to hands while using portable tools e.g. hacksaws, files knives, screwdrivers etc and handling sharp-edged material	Self	Students to have seen DTB safety video on portable tool hazards. Vigilance expected	Demonstrator to check

UPS S2/97

OSCar
BOC


belt



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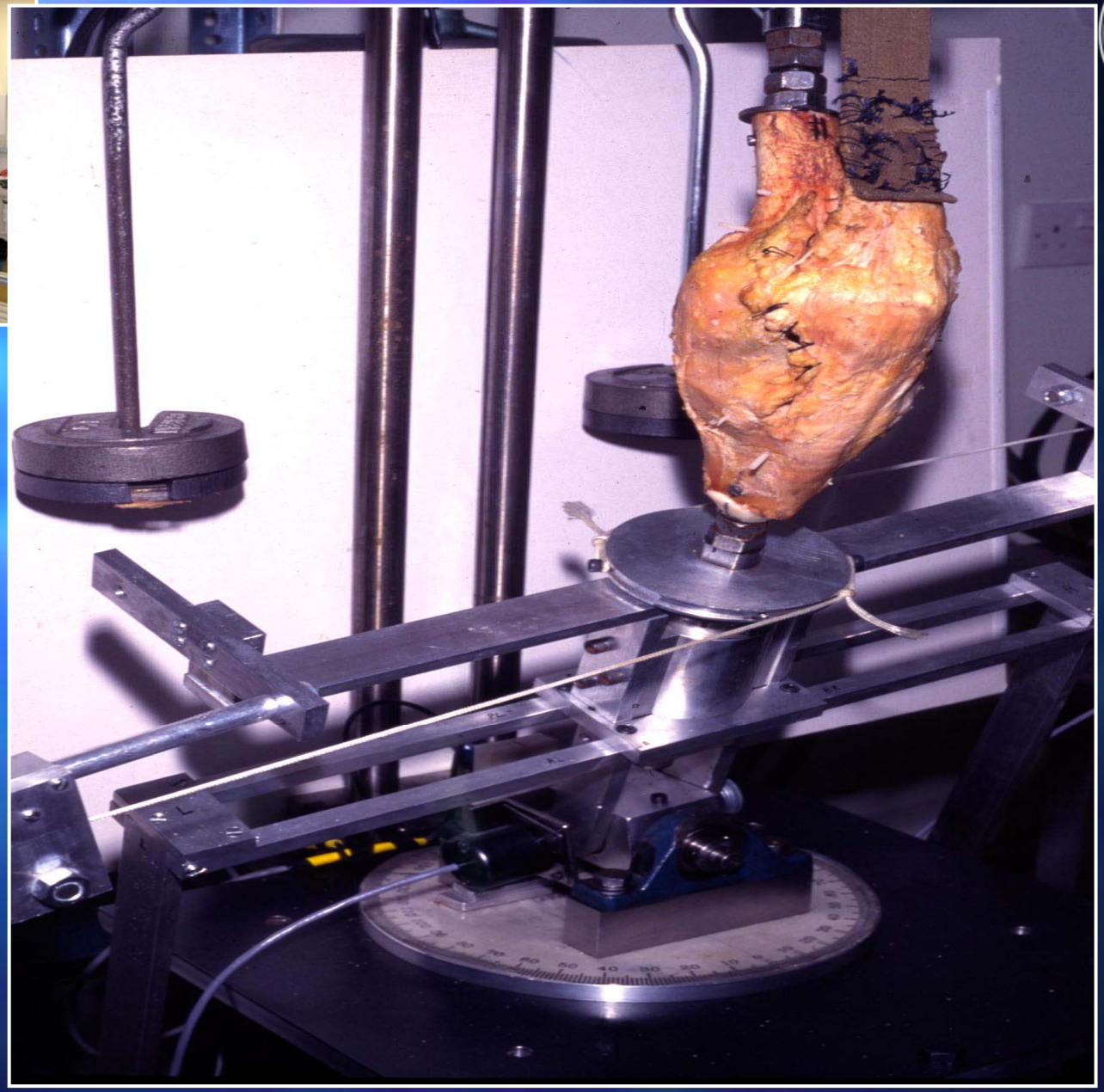


Work with human tissue/fluids

not allowed

unless samples come from screened sources

Risk Assessment	Testing Rig for Analysis of Knee Joint Mechanics			Page 1 of 1
In Building	Tebbit Centre, Nuffield Orthopaedic Centre			
Assessment undertaken	Neil Bianchi	Signed	Date :	18/11/05
Assessment supervisor	Dr A Zavatsky	Signed	Date :	18/11/05

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Control Risk
Injury to head, hands, fingers following sudden failure of cable supporting load carrier and top flexible joint.	User	Cable to be inspected daily for signs of fraying.	- Replace cable if wear observed. - Install hard stop to limit downward movement of top flexible joint.
Transmission of infectious diseases when rig and hand tools used for testing human joints	User	- Cadaver knee joints obtained from accredited source certified free from HIV, Hepatitis, and Tetanus. - Surgical dissection tools remain in dissection area. - Separate workshop tools used in project area - Main surfaces covered with protective sheeting when rig used for cadaver knee joints - Rig chemically and biologically cleaned as per defined instructions after contact with human material.	Rig to be visually checked for any evidence of inadequate cleaning.

Your E-mail Address ……Checked by ..... date ……..
(D J Reed)

Oestrogen removal from Sewerage

Department of Engineering Science

Risk Assessment

Form RA01 Revised 10/04

Risk Assessment of	**Oestrogen Removal from Activated Sewerage Sludge – Revision 2**			Page 1 of 2
In Building	CEH Wallingford		Review Date :	27th Sept 2007
Assessment undertaken by	Nan Xu	Signed	Date :	27th Sept 2006
Assessment supervisor	R C Darton/N Hankin	Signed	Date :	27th Sept 2006

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Control Risk
Possible road accident during driving to site	Driver and persons affected by the possible accident	1. Drivers to go through Oxford approval system. 2. Staff instructed not to drive if overtired.	Supervisor to check licence acceptability and minimum age requirements
Pulls, strains, and minor injuries from carrying equipment to site	Staff carrying equipment	1. Register with STW staff on arrival. 2. Wear safety boots. 3. Do not carry more than is comfortable. 4. Take account of the terrain to be crossed.	DSO to supply shoes/boots
Drowning by falling into treatment tanks	Staff collecting sludge samples	1. Respect safety barriers, do not take unnecessary/unrehearsed risks. 2. Always alert STW staff to our presence on site. 3. Wear fluorescent jackets & 275N lifejacket. 4. Be careful when moving around and avoid trip hazards. 5. Work in pairs whenever possible.	
Mild to serious illness caused by exposure to pathogenic organisms and viruses	Staff collecting sludge samples on site and handling and disposal of sludge in experiment.	1. Be vaccinated against Hepatitis A and B, tetanus and polio. 2. Wear disposable (paper based) protective clothing including safety glasses and gloves. 3. Wear face mask when likelihood of splash. 4. Use biohazard tape to label bottles and signs to identify hazardous equipment. Put warning signs on door restricting access to approved personnel only. 5. Conduct all experiments handling sludge in a fume cupboard to remove bad smell, hazardous gas and restrict splashing. 6. Place the bioreactor over lab trays and mats in case of leakage and overspill.	Absorb spillages on bentonite and use tissues to mop up before placing in yellow biohazard bag. Alert DSO for safe disposal. DSO to provide bentonite

Department of Engineering Science

Risk Assessment

Form RA01 Revised 10/04

		7. All used equipment and unwanted sewage/solids disinfected with 2% Virkon at first opportunity. 8. Other contaminated solid material e.g. gloves, tissues, rags, disposable overalls/laboratory coats, spill mats to be placed in yellow 'bio-bags'. 9. Do not eat, drink or touch face/lips whilst running experiment. 10. When in laboratory, wash hands with HY-G-Clenz anti-bactericidal soap. If similar not available at STW, wash hands with domestic soap and apply NovaClenz Instant Hand Sanitizer	
Illness from chemicals which are potential carcinogens, including oestrone, oestradiol and ethinyloestradiol	Staff performing the experiment of oestrogen removal.	1. Pregnant women must not use these chemicals. 2. Wear disposable laboratory coats including gloves at all times during experiment. 3. Refer to separate COSHH form and safety data sheets on chemicals. 4. Make up new stock solutions in fume cupboard. 5. Bag stock solutions and keep in fridge. 6. Work on disposable spill mats. 7. Take care when filtering of pressure build-up. Replace filters regularly. Wear goggles when filtering. 8. Discard liquid/solvent steroid waste in soil waste bin with bentonite/soil.	1. If contact with skin, wash with copious amounts of water. 2. Eyewash provided for emergency use.
240 Vac electrical hazard	Researcher, Visitors	Portable equipment subject to regular test and inspection. RCD breakers fitted to ring main.	Check validity of PAT label. Contact Electronics if inspection label out of date.

Assessment confirmed

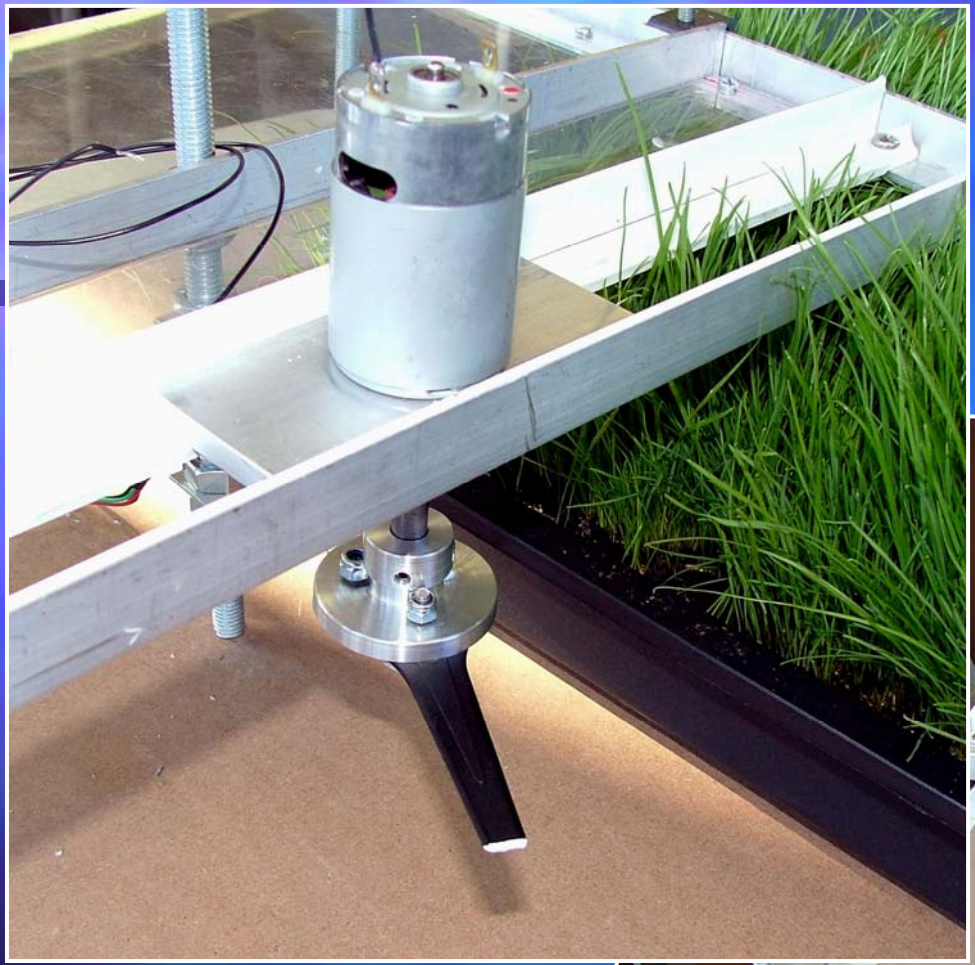
D J Reed (DSO)

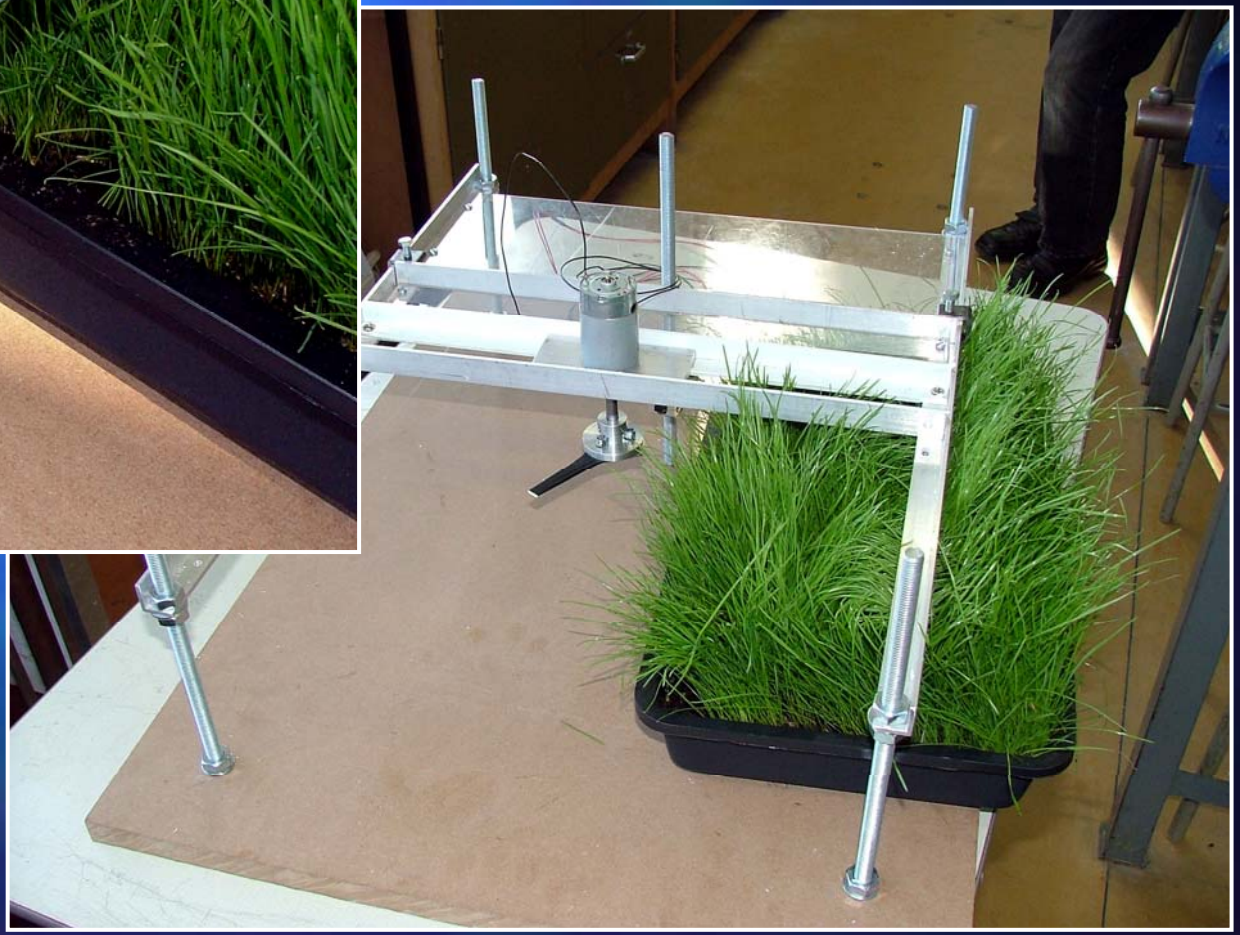
Date 27th September 2006

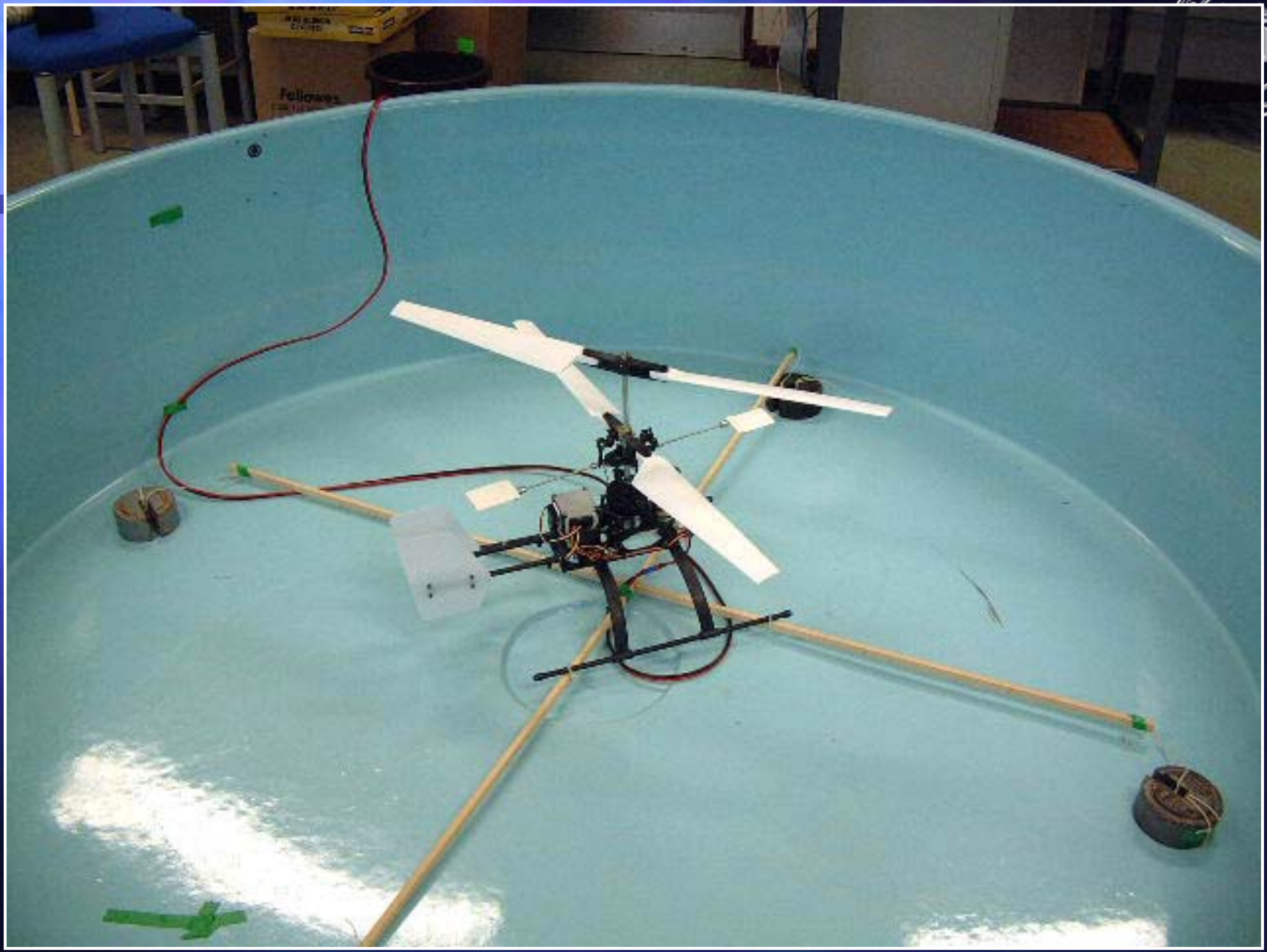
川流不息

Risk Assessment of	Air Conditioning Test Rig (A Dexter)				Page 1 of 1
In Building	ETB - Room 30.06a			Review Date	5/10/08
Assessment undertaken by	A Dexter	Signed		Date :	5/10/06
Assessment supervisor	D J Reed (DSO)	Signed		Date :	5/10/06

Hazard	Persons at risk	Risk Controls In Place	Further Action Necessary To Contro Risk
Inhalation of Klea 134a refrigerant air- conditioning gas through leakage.	All present	Gas detectable by ethereal odour. Not classified as dangerous according to directive 67/548/EEC Manufacturer advises low acute toxicity, but very high exposures may cause anaesthetic effects and asphyxiation Air-con system subject to regular external maintenance	Manufacturer advises that technology not yet developed to monitor 134a gas on a continuous basis. Ensure room is well ventilated and evacuated if refrigerant leak suspected Call DSO.
Legionellosis (from humidifier)	All present	System drained when not in use. Add biocide e.g. Fi-Clor when humidifier refilled. Check chlorine level with 'Aquacheck' test strips – details from DSO.	Supervisor to monitor
Injury through contact with electricity and/or contact of water with electrical sources.			
- 24v circuits		Not considered hazardous	None
- 240/415 v circuits	All present	HV equipment suitably marked & FAT tested. RCD circuit breakers fitted and rig earth bonded. Emergency stops fitted in event of fire. Electrical repairs/alterations undertaken only by departmental electrician or competent contractor.	Supervisor to check Supervisor to ensure that personnel know of existence and purpose of E-stops.
240 v portable appliances	All present	Equipment PAT tested by Electronics	Supervisor to check validity of PAT test label. Contract Electronics for retest if required.
Water loss & overheating in heating coil	All present	Heater system fitted with thermal electrical cut-out switch	None



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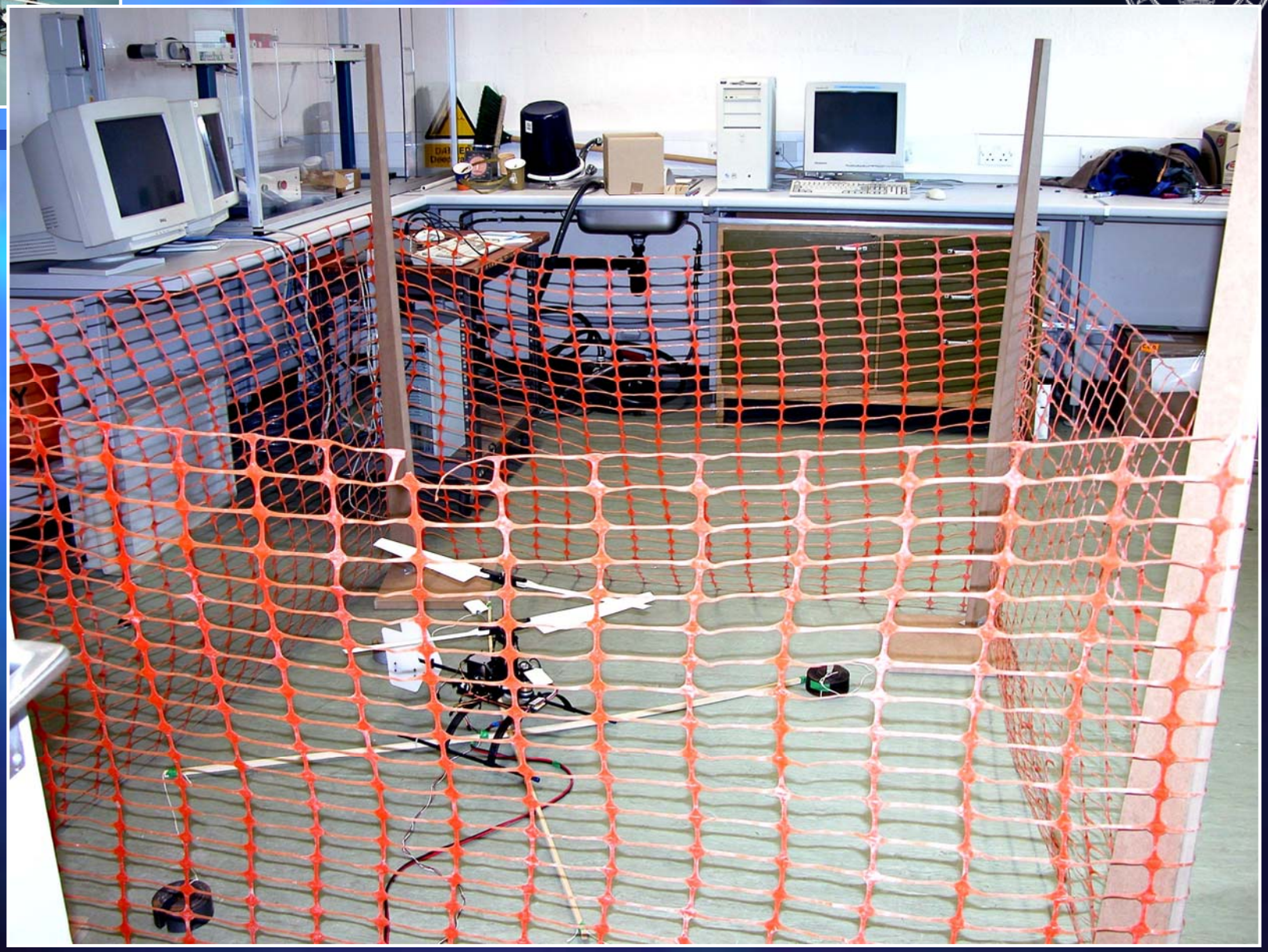
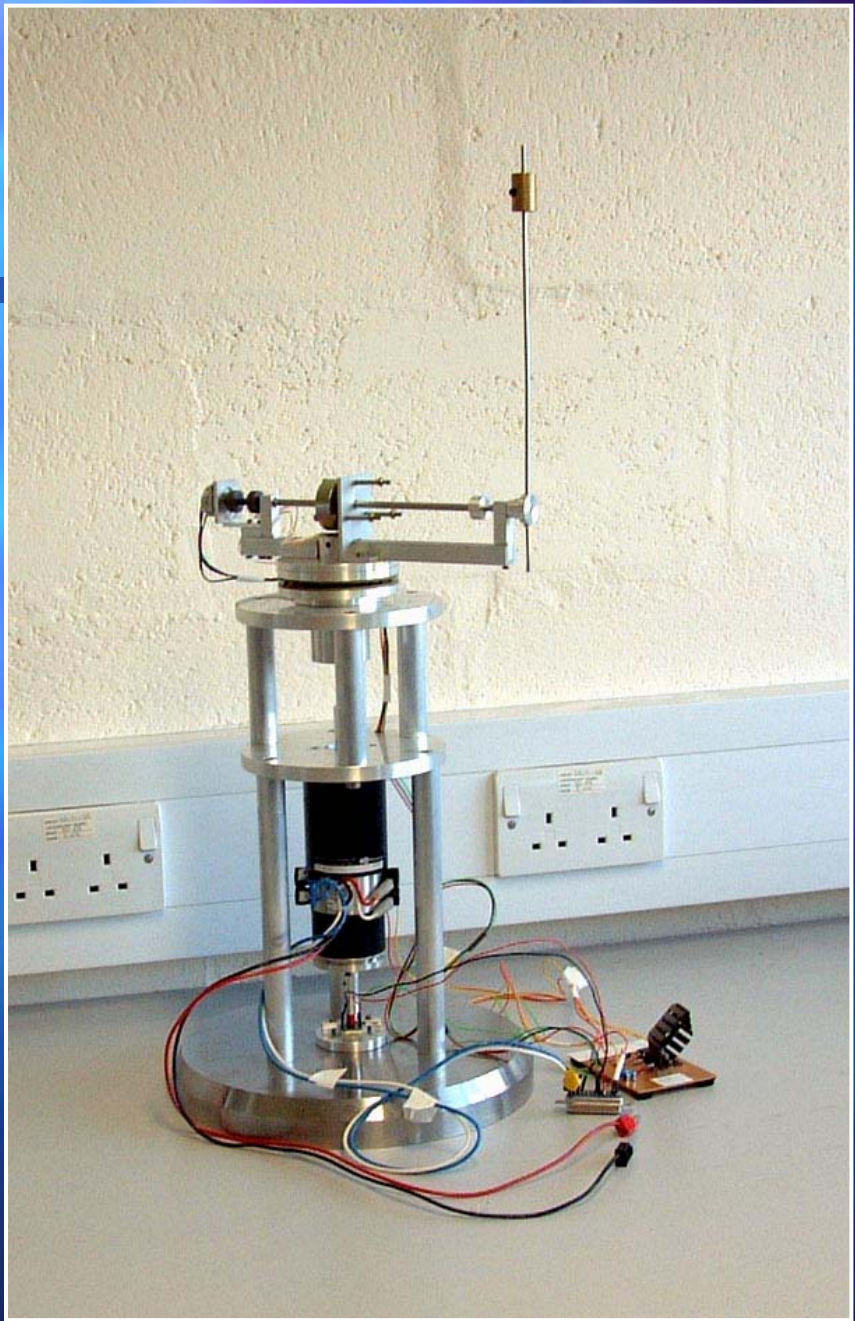




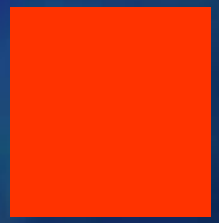
Generic Risk Assessment	4th Year Project - Rotating Inverted Pendulum			Page 1 of 1
In Building	Thom Floor 5 - Control Lab		Review Date :	22/11/07
Assessment undertaken by	A Abouelwata	Signed	Date :	22/11/05
Assessment supervisor	B Kouvaritakis	Signed	Date :	22/11/05

Hazard	Persons Who Might be Harmed	Risk Controls In Place	Further Action Necessary To Control Risk
240 VAC electrical shock	User	Equipment PAT tested by Electronics	Supervisor to check validity of PAT test label. Contact Electronics if past 'best-by' date.
Injury to eyes from sudden detachment of pendulum and/or pendulum weight.	User	Ensure pendulum and weight firmly attached before equipment used.	Wear eye protection
Entanglement/ entrapment in other rotating components	User	Stand well clear while equipment in operation.	None

COSHH

(Control of Substances Hazardous to Health)

- material specific
- review substances used
  - supplier material safety data sheet



Flammable

- seek advice from DSO

COSHH Assessment Form

Read the notes on completion before attempting to fill in this form. If insufficient space is available under any section, use a separate piece of paper and attach it to the form.	Serial No: Date:
Department: Location of work:	Persons involved:

Description of procedure:

Substances used:	Quantities Used	Frequency of use	Hazards identified	Exposure route

Could a less hazardous substance (or form of substance) be used instead? yes / no
Justify not using it:

What measures have you taken to control risk?
Engineering controls:

PPE:

Management measures:

Checks on control measures:

Is health surveillance required? yes / no	Training requirements
Emergency procedures: Fire: Spillage:	Waste disposal:

Name and position of assessor:	Signature:
Name of supervisor (student work only):	Signature:
Name of head of department or nominee (DSO):	Signature:

HEWDEN
JLG LIFT

PAT (Portable Appliance testing)

- 13 amp plug
- > 110 v output
- Dave Russell - Electronics
  Thom Building - Floor 5
  x 73046

NEXT TEST DUE
DATE
ACTIONED - BY
Sep 07

TESTED UNTIL
O.U.E.L.
MAY 10

TESTED FOR
ELECTRICAL SAFETY
Initials
Date
Re-test due MAR 06

NEXT TEST DUE

NEXT TEST DUE
Weller

Department of Eng. Science

Generic Risk Assessment

Form RA01 05/01

Generic Risk Assessment	Electrical Equipment Safety				Page 1 of 1
In Building	All locations		Review Date :	15/11/08	
Assessment undertaken		Signed	Date :		
Assessment supervisor	D J Reed (DSO)	Signed	Date :	15/11/06	

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Control Risk
240 Vac electric shock from portable equipment	User	RCD circuit breakers fitted to ring main. Equipment PAT tested by Electronics	Supervisor to check validity of PAT test label. Contact Electronics if past 'best-by' date.
240/415 Vac circuits	User	RCD Circuit breakers fitted HV equipment suitably marked. Emergency stops fitted in event of fire Electrical installation, alteration and repairs undertaken only by departmental electrician or competent contractor	Supervisor to check Supervisor to ensure that personnel know of existence and purpose.
240/415 Vac fire/electric shock from fixed appliances	User	Examined in accordance with Department code of practice for Fixed Electrical Appliance Testing V 1.3 dated November 06. Copies with Departmental Safety Officer Electronics Workshop Library Maintenance Workshop General Office Website	Supervisor to ensure that equipment carries a valid FEAT test label

UPS S2/97

Risk Assessment	Computer Workstation			Page 1 of 1
In Building	General		Review Date	4th October 2008
Assessment undertaken		Signed	Date :	4th October 2006
Assessment supervisor	D J Reed (DSO)	Signed	Date :	4th October 2006

Hazard	Persons at Risk	Risk Controls In Place	Further Action Necessary To Control Risk
Eyestrain	User	Take regular breaks 10 mins./hour - look at distant objects - adjust screen location to prevent glare or bright reflections. - ensure no screen flicker, is eye test necessary	Consult Supervisor and advise Departmental Safety Officer if problems persist
Back pain	User	Chair back properly adjusted - exercise muscles	Supervisor to check
Aching shoulders, wrists	User	Check seat height - forearms horizontal, level with top of desk - keep wrists straight, use wrist rest - no overreaching, exercise muscles	Supervisor to check
Aching neck	User	Check screen height - eyes level with top of screen, use document holder - exercise muscles	Supervisor to check
Aching legs	User	Check space under desk to stretch legs, feet rest comfortably on floor otherwise get footrest. - exercise muscles	Supervisor to check
240 VAC Electrical shock	User	Equipment PAT tested by Electronics	Supervisor to check validity of PAT test label

Training ?

- Introduction to Biological Safety
  Monday 29th October 2007 10.00 – 12.00
- Introduction to Biological Safety Cabinets
  Wednesday 31st October 2007 10.30 – 11.30
- Handling Compressed Gases in Cylinders
  Wednesday 7th November 2007 9.30 – 12.30
- Handling Cryogenic Liquids e.g. Liquid Nitrogen
  Wednesday 7th November 2007 14.00 – 17.00

Contact DSO

And now ?

Any difficulties – don’t struggle

Get help

my door is always open

Remember

- integral part of project
- approved by DSO by 4pm.
  Monday 5th November (this year)
- check 4 yr. noticeboard (name & shame)
- marked with project

Website

eng.ox.ac.uk

- Intranet
- Departmental Services
- Health & Safety